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THE STATUS OF AUDIO-VISUAL PROGRAMS IN
SASKATCHEWAN HIGH SCHOOLS IN 1968-69

by



FRED J. BUGLAS

A THESIS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "The Status of Audio-Visual Programs in Saskatchewan High Schools in 1968-69" submitted by Fred J. Buglas in partial fulfillment of the requirements for the degree of Master of Education.

ABSTRACT

This study had two primary purposes--to establish the status of audio-visual programs in Saskatchewan high schools and to make recommendations based upon an analysis of the data collected and through a comparison of this data with the Educational Media Association of Canada Guidelines. The study assumed that audio-visual media, when properly used, can make a valuable contribution to the educational process. It was further assumed that the Educational Media Association of Canada Guidelines represent a desirable level of development for audio-visual programs in Saskatchewan high schools at this time.

A survey instrument was developed and mailed to all 339 schools in Saskatchewan which enrolled grades 10, 11, and 12. Three hundred six or 90.3 per cent of the schools returned the completed questionnaires to provide the data for the study. Information was obtained about the following aspects of the audio-visual programs: organization, facilities, budget, personnel, local production of materials, in-service AV training, materials, equipment, barriers to an improved AV program, evaluation and future plans for AV media.

The findings of the study showed that a majority of Saskatchewan high schools was not served by either a district or building instructional materials center. Most schools did not use AV committees. The AV services were organized in a variety of ways. Student access to AV materials on the same basis as books, was reported by only a few schools.

Facilities for the use of AV media were inadequate. The number of classrooms with adequate light control and projection screens fell far below the EMAC recommendations.

Few schools reported an independent AV budget. Expenditures for AV equipment, AV expendable supplies and AV materials were small in comparison with the EMAC standards.

In general, audio-visual coordinators in Saskatchewan high schools had little or no professional AV education, had more than five years teaching experience, had no released time for AV duties and had assumed relatively limited responsibilities. Only one-quarter of all the schools reported using student assistants in their AV programs.

Equipment for local production was quite limited in the schools as were the quantities of materials produced. The most commonly available instructional materials were library books. Disc recordings, audio tape recordings, filmstrips and overhead transparencies were the most commonly available AV materials, although the quantities were considerably below the EMAC standards.

Saskatchewan high schools reported a lack of financial support, a lack of teacher time for preparation of materials and inadequate facilities for the use of AV media as the most common barriers to an improved audio-visual media program.

Systematic evaluation of audio-visual programs was not widely carried out. Relatively few respondents were familiar with the EMAC Guidelines.

Future plans for media programs include increased use of 16 mm films, overhead transparencies and reel tape recordings. Few schools reported plans to hire media specialists or technicians within the next two years.

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The cooperation and encouragement from Mrs. A. Davidson, Supervisor of the Visual Education Section of the Saskatchewan Department of Education, was much appreciated.

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CHAPTER I

INTRODUCTION

I. INTRODUCTION TO THE PROBLEM

The formal educational process is undergoing a period of probing and questioning unparalleled in its history. The quest for answers to educational problems leaves no objective, premise, method or type of organization sacrosanct. Education must cope with a rapidly increasing body of knowledge, a growing and urbanizing population, student demands for a meaningful curriculum, a need for equalizing educational opportunity, a problem of raising teacher qualifications, and a much publicized problem of rising costs.

Related to, or resulting from these problems, several trends seem to be prevalent in schools today. A reassessment of the place of the individual student in the system has resulted in moves toward individualized learning. Emphasis has shifted to learning rather than teaching and with it the responsibility has shifted more toward the student. The traditional thirty student--one teacher--box classroom ratio is gradually giving way to varied size student groups, team teaching and flexible physical facilities. Because formal education is becoming a cradle to grave process, the stress on individual learning will be doubly increased.

In dealing with these situations, more and more educators are calling upon technology to help provide part of the answer. Technology, as an integral and increasingly significant aspect of our society,

should be an integral and growing aspect of our educational system. The oft-raised fear that educational technology will dehumanize, must be answered with an understanding that technology like the school, is a means and not an end in itself. It is inevitable that sophisticated technology such as the computer, will influence a large part of the instructional process and decidedly change the role of the teacher.

Because present use of the computer in education is not widespread, this study involves other less costly and more readily available audio-visual media. After a limited acceptance over several decades, these audio-visual media are now becoming an integral part of modern education. Educators should no longer be asking, "Can audio-visual media make a contribution to education?" but rather, "How can audio-visual media best be utilized?" Before this question can be considered, however, the relationship of audio-visual media to the educational process should be explored.

A 1963 National Education Association position paper describes the function of media in relation to the teacher.

1. . . . to supplement the teacher through enhancing his effectiveness in the classroom.
2. . . . the teacher determines objectives, selects methods and content, evaluates the final learning outcomes. The presentation of information and even the direction of routine pupil activities, may be turned over to such new media as programmed learning materials, television, or motion pictures.¹

¹Barry Morris (ed.), "The Function of Media in the Public Schools," (A Task Force Position Paper), Audiovisual Instruction, Vol. 8, No. 1, (January, 1963), p. 11.

This description seems to consider the use of media only from a teacher viewpoint. However, the 1968 Hall-Dennis report states that the professional teacher looks upon media as "tools for learning, and not as crutches to compensate for ineffective instruction."² An Ontario Curriculum Committee stated that the use of technology benefits the learner by allowing increased flexibility in the organization of learning situations.³

Audio-visual media make their most effective contribution to education if they are integrated with the curriculum, basic to learning, and not adjunctive aids.

II. NEED FOR THE STUDY

Audio-visual media, which are playing an increasingly significant role in modern education, are viewed from a variety of perspectives by the individuals involved. From the media, a learner may gain basic instruction, enrichment or acceleration. The teacher employs media as a different and often more effective means of achieving objectives with his students. The administrator sees the media as a way to a more efficient and better quality education for his school. Audio-visual media to a school board member represent part of his responsibility to

²E. M. Hall and L. A. Dennis, Living and Learning; the Report of the Provincial Committee on Aims and Objectives in the Schools of Ontario (Toronto, Newton Publishing Co., 1968), p. 126.

³Ontario Curriculum Institute Committee on Instructional Aids and Techniques, Technology in Learning, (Ontario Curriculum Institute, 1965), p. 13.

provide the facilities, equipment and materials for a good learning climate. A provincial department of education charged with striving for better education and equality of opportunity in widely varying districts, turns to the media as a means to this end. But a very small amount of Canadian research has taken place in the area of audio-visual media. There is a distinct need for this research if meaningful decisions are to be made by those people involved in implementing audio-visual media programs.

The Saskatchewan Department of Education surveyed sixty-six school units and twenty city school systems with regard to their 1967 audio-visual materials expenditures. Fifty-eight school units and nineteen city systems completed and returned the questionnaires. They reported spending a total of \$201,550. for audio-visual materials in that year.⁴ This would indicate that audio-visual programs do exist in the province, and that money is budgeted for them. A survey of these programs could establish a body of data on which to base further planning.

A study of the audio-visual programs in Saskatchewan high schools can be justified by the following needs:

1. A review of research and literature reveals that no comprehensive study of audio-visual programs has been carried out in the province's high schools.

⁴Information recorded in a personal letter to the writer from Mrs. A. Davidson, Supervisor, Visual Education Section, Department of Education, Regina, Saskatchewan (January 28, 1969).

2. If future studies are made, this data will serve as a basis for comparison.
3. The Visual Education Branch of the Saskatchewan Department of Education has expressed interest in the data to be collected. The findings may serve as a basis for assessing provincial trends and needs.
4. The Instructional Materials Committee of the Saskatchewan Teachers Federation has expressed interest in the study. The findings may serve as a basis for some of the committee's planning.
5. The findings of this study should assist administrators, AV coordinators, teachers and school boards when initiating, expanding or evaluating a specific audio-visual program.
6. This study may serve to focus the attention of Saskatchewan administrators, teachers and school boards on the audio-visual programs in their schools.

III. ASSUMPTIONS OF THE STUDY

The following assumptions are made as a basis for this study.

1. It is assumed that audio-visual media, when properly used, can make a valuable contribution to the educational process.

2. It is further assumed that the Educational Media Association of Canada Guidelines represent a desirable level of development for audio-visual programs in Saskatchewan high schools.

IV. DELIMITATIONS OF THE STUDY

This study was limited by the following considerations.

1. The data collected pertained only to the 306 Saskatchewan high schools which completed the questionnaire.

2. The information for this study applied to the spring of 1969 except for budget questions which specifically asked for the calendar year, 1968.

3. The inherent limitations of the questionnaire method of collecting data apply to this study, i.e., problem and bias of non response, misinterpretation by respondents, possible processing errors, and interpretative errors.⁵

4. Programmed learning and computer assisted instruction were not included in this study.

5. Answers to some questions involved an observation or estimate by the respondent. Schools enrolling grades other than 10, 11 and 12 were asked to prorate all numerical responses for grades 10, 11 and 12 only.

⁵Carter V. Good, Introduction to Educational Research (New York: Appleton-Century-Crofts, 1963), p. 270.

V. DEFINITIONS OF TERMS

Several of the terms which are used in this study require a definition to ensure a clear understanding of the findings.

1. High School: for purposes of this study, grades 10 11 and 12 whether all or part of a school enrollment.

2. Audio-visual Materials: for purposes of this study, the non-print sensory materials listed in items 100 to 109 of the questionnaire.⁶

3. Instructional Materials (Curriculum Materials): a broad term including print and non-print materials used for educational purposes.

4. Audio-visual Media: all audio-visual materials plus the instruments which facilitate them.

5. Instructional Media (Educational Media): a broad term including print and audio-visual materials plus any instruments which facilitate them.

6. Audio-visual Coordinator: the person in a school who is responsible for the audio-visual program.

7. Audio-visual Media Specialist (media specialist, media advisor): a teacher with special training in the selection and use of audio-visual media.

8. Audio-visual Media Technician (media technician): a non-teacher involved in the production of audio-visual materials and/or maintenance of audio-visual supplies and equipment.

⁶See Appendix B.

9. Audio-visual Program: those aspects of a school which relate directly to the audio-visual media including materials, equipment, facilities, budgeting, personnel, organization, servicing, local production, in-service training, utilization practices, expansion plans and evaluation.

10. Instructional Materials Center (IMC) at the Building Level: the services and facility where audio-visual and print materials are located, serviced, distributed and used in the school.

11. Centralized Instructional Materials Center: an instructional media service at the district level which collects, distributes, services and sometimes produces audio-visual and print materials.

12. Educational Media Association of Canada Guidelines (EMAC Guidelines): the recommended standards for Canadian audio-visual programs as presented in The Canadian Audio Visual Review (January-February, 1968).⁷

VI. STATEMENT OF THE PROBLEM

The purposes of the study were two:

1. To establish the status of audio-visual programs in Saskatchewan high schools.

2. To make recommendations based on an analysis of the data collected and a comparison with Educational Media Association of Canada Guidelines.

⁷The Canadian Audio Visual Review, Vol. 4, No. 1, (January-February, 1968), pp. 11-34.

In this study an attempt was made to answer the following questions about the status of audio-visual programs in Saskatchewan high schools:

1. What organizational patterns are used for the locating of media services, operating procedures and staffing of the audio-visual program in the schools?

2. What types and quantities of audio-visual materials are located in the schools?

3. What physical facilities for utilization of audio-visual media are in the schools?

4. What types and quantities of equipment for the use of audio-visual materials are in the schools?

5. How much money was spent during 1968 on audio-visual equipment, print materials, audio-visual materials and expendable items?

6. Do the schools have AV coordinators? What responsibilities do they have?

7. Does the school use student assistants in the AV program?

8. How much local production takes place in the schools?

9. Do the schools operate audio-visual in-service programs?

10. What are the major barriers to improved audio-visual programs in the schools?

11. Do schools evaluate their audio-visual programs?

12. What plans do the schools have for development of audio-visual media programs?

13. How does the status of existing programs compare with Educational Media Association of Canada Guidelines?

14. Do schools served by a centralized Instructional Materials Center have better developed audio-visual programs than those which do not have this service?

15. Is the development of the audio-visual program related to the enrollment of the school?

VII. ORGANIZATION OF THE STUDY

The remainder of this study consists of five chapters. Chapter II is divided into two parts: part I is a review of related audio-visual research and part II examines the literature in the field to determine some of the characteristics for a well organized audio-visual program. In Chapter III, "Design of the Study", the population, questionnaire and collection and treatment of data are described. Chapter IV reports the findings as established by an analysis of the data collected by the questionnaire. Chapter V involves a comparison of the findings with the EMAC Guidelines. The final chapter presents a summary of the findings, outlines the conclusions and offers several recommendations based on the conclusions.

CHAPTER II

A REVIEW OF RELATED RESEARCH AND LITERATURE

An examination was made of research and literature related to the subject of audio-visual programs in secondary schools. Because of a general lack of Canadian research and literature in all areas of audio-visual media, much of the material examined, originated in the United States. Part I of this chapter reviews several studies which either survey audio-visual programs or relate to a specific portion of the overall topic. Part II is a discussion of recent literature related to eleven specific aspects of an audio-visual program. They are organization, facilities, finance, personnel, local production of materials, in-service education, equipment, materials, major barriers to an improved program, evaluation of an audio-visual program, and planned expansion.

I. RELATED RESEARCH

A national survey was conducted in Canada in 1967 by The Canadian Audio Visual Review. As a result of this survey, the Educational Media Association of Canada in 1968 published a set of guidelines for audio-visual programs in Canadian schools.¹ In 1969 these guidelines were republished in book form, Media Canada.²

¹The Canadian Audio Visual Review, op. cit.

²J. D. Miller (ed.), Media Canada: Guidelines For Education (Toronto: Pergamon of Canada Ltd., 1969).

The guidelines include equipment recommendations for elementary³ and secondary⁴ schools at "basic" and "advanced" levels of audio-visual program development. Non-print materials guidelines include the types and quantities of materials required for a basic audio-visual program.⁵ The guidelines suggest space requirements for selected audio-visual services in the school resource center.⁶ Specific budget requirements for non-print and consumable materials are recommended on an enrollment basis, also at "basic" and "advanced" levels.⁷ Media personnel guidelines state the number and type of persons recommended for a school as well as listing their responsibilities.⁸

In 1964, Dralle completed a study on the status of senior high school audio-visual programs in the state of Indiana.⁹ A questionnaire was sent to all 612 high schools in the state; 460 schools returned the questionnaire for a 75 per cent return. Data from these schools were

³The Canadian Audio Visual Review, op. cit., p. 16.

⁴Ibid., p. 18.

⁵Ibid., p. 28.

⁶Ibid.

⁷Ibid.

⁸Ibid., p. 29.

⁹Wayne Roger Dralle, "The Status of Senior High School Audio-visual Programs in Indiana in 1963-64 with Recommendations for Improvement" (Unpublished Doctoral Dissertation, Indiana University, Bloomington, 1964).

tabulated. On the basis of this information, ten schools were selected for visitation. Interviews were carried on with the principal, AV coordinator and teachers in each of the schools. Case studies were developed to describe each.¹⁰ He concluded¹¹ that the organizational pattern did not necessarily influence the effectiveness of the AV program. Administrative support was crucial to the success of the programs. AV coordinators lacked professional training, did not receive enough released time and were frequently regarded as clerks or technicians. Student assistants made an important contribution to the programs. The quality of AV programs in the high schools was hampered by a lack of funds. Physical facilities were often inadequate from an AV standpoint. Programs of local production were not well developed. Systematic evaluation of AV programs had not taken place.

In 1967 Godfrey published a study carried out in several stages from 1961 to 1966 for the National Education Association in public school districts across the United States.¹² Phase one involved collecting data on the quantities of materials and equipment in 2927 districts, 40 per cent of the number solicited.¹³ A 1962 study looked at the school rather

¹⁰Ibid., p. 10.

¹¹Ibid., p. 283.

¹²Eleanor P. Godfrey, The State of Audiovisual Technology: 1961-1966 (Washington: Department of Audiovisual Instruction, National Education Association of the United States, 1967).

¹³Ibid., p. 12.

than district level.¹⁴ In order to measure changes in audio-visual resources and aspirations, a random sample of 247 districts was surveyed, with a 1964 follow up questionnaire completed by 238 of the same districts.¹⁵ These districts were stratified according to region and size. National estimates were made, based on these samples.

Several findings which she reported were these: from 1961 to 1964 there was a consistent demand for all media surveyed except the opaque projector;¹⁶ new media appeared to be adopted more readily by growing "Complex" districts than small stable districts;¹⁷ centralization of the administration of audio-visual programs correlated positively with inventory increase.¹⁸ No patterns for influencing change emerged in the study; personal observation affected use more than reports or papers.¹⁹ Godfrey concluded that resistance to new media because of either lack of budget or insufficient size would lead to increased differentiation between these small districts and large wealthy districts.²⁰

¹⁴Ibid., p. 36.

¹⁵Ibid., p. 76.

¹⁶Ibid., p. 92.

¹⁷Ibid., p. 102.

¹⁸Ibid., p. 87.

¹⁹Ibid., p. 97.

²⁰Ibid.

A study of the administrative structure of the provincial audio-visual program in Saskatchewan was conducted by Foster in 1950.²¹ Through interviews and personal investigation of Department of Education documents, policies and records, he gathered data about the operation of the Visual Education Division and the status of provincial audio-visual education. He recommended²² that the Visual Education Division be made a division within an over-all instructional materials branch or be made a separate branch of the Department of Education. This branch should operate as a service for all levels of education, providing a wide range of audio-visual materials and production services. He further recommended that two provincial regional audio-visual centers should be established and that they be tied to teacher training institutions.²³

In 1967, Streeter studied the relationship between media competency and media use with a group of Michigan teachers.²⁴ He concluded that as a teacher's competence in skills and understanding of media increased, the frequency with which the teacher used educational media also increased.²⁵ However, some media competencies might be

²¹John Edwin Foster, "The Administrative Means of Extending the Use of Audio-Visual Materials in Saskatchewan" (Unpublished Doctoral Dissertation, Indiana University, Bloomington, 1950).

²²Ibid., p. 200.

²³Ibid., p. 201.

²⁴Charles Edward Streeter, "A Study of Relationships Among Selected Factors Affecting Media Use by Classroom Teachers Within Selected School Systems" (Unpublished Doctoral Dissertation, Michigan State University, 1967).

²⁵Ibid., p. 81.

linked to the frequency with which the teacher used media.²⁶ Many teachers who did not receive media training during college had acquired media skills through in-service programs.²⁷ None of the following: grade level taught, sex of teachers, or years of teaching experience were significantly related to the amount of the teacher's use of media.²⁸

Several findings and conclusions from a study by Sister Mary Richardine Quirk relate to various features of an audio-visual program.²⁹ She reported a 1965 study of 360 Catholic Elementary schools from across the United States. Responses to questions about organization of audio-visual materials and equipment revealed that 129 (48 per cent) of the schools housed materials and equipment in the classrooms, 125 (46 per cent) in principal's offices and 75 (28 per cent) in the libraries.³⁰ She concluded that schools reporting materials and equipment located in more than one area revealed either an attempt at decentralization for increased usage or simply a lack of coordination.³¹

²⁶Ibid., p. 82.

²⁷Ibid.

²⁸Ibid., p. 83.

²⁹Sister Mary Richardine Quirk, "An Analysis of the Use of Audio-Visual Materials in Catholic Elementary Schools." (Unpublished Doctoral Dissertation, The Catholic University of America, Washington, D. C., 1965).

³⁰Ibid., p. 63.

³¹Ibid., p. 141.

With regard to physical facilities, 208 (76 per cent) schools reported sufficient convenient electrical outlets and 61 (22 per cent) reported light control for all classrooms, but 130 (47 per cent) reported no classrooms with light control.³²

Audio-visual coordinators were reported in 67 (23 per cent) schools, with 25 (38 per cent) having preparation by formal audio-visual training. Twenty-three (52 per cent) coordinators reported less than one hour weekly of released time, while only 4 (9 per cent) coordinators reported more than three hours weekly of released time.³³

The three most commonly reported strengths of audio-visual programs according to principals' opinions were:

1. Many teachers on staff believe that the use of audio-visual materials is improving the teaching/learning situation in their classes.
2. Schools are consistently increasing amounts of audio-visual equipment and materials.
3. Three-quarters or more of experienced teachers on staff are prepared to use audio-visual equipment and materials.³⁴

The three most commonly reported weaknesses were:

1. Insufficient funds are available for audio-visual programs.
2. The school's audio-visual program is not coordinated.
3. The school does not sponsor audio-visual in-service opportunities for the staff.³⁵

³²Ibid., p. 60.

³³Ibid., p. 135.

³⁴Ibid., p. 136.

³⁵Ibid.

When Taylor surveyed audio-visual programs in elementary schools in a county of West Virginia in 1966, she concluded³⁶ that teachers lacked training in production and use of audio-visual materials, that audio-visual workshops were needed, that separate audio-visual budgets should be used, that there was a need for centralized Instructional Materials Centers and that leadership for audio-visual programs should start with the principals.

Both Smith³⁷ and Severns³⁸ reported a need felt among teachers for more released time for the audio-visual coordinators and more in-service training for teachers. Severns also reported that teachers want materials related to the curriculum.³⁹

II. RELATED LITERATURE

Organization of an Audio-Visual Program

No aspect of an audio-visual program is more vital to its success than its organization. Bearing in mind that educational media are only

³⁶Norma Lee Taylor, "Study to Determine Effective Methods of Organizing and Administering an Audio-Visual Program for the Kanawha County Elementary Schools" (Unpublished Master's Thesis, Marshall University, 1966), p. 74.

³⁷Steve N. Smith, "A Study of the Organization, Administration and Utilization of Audiovisual Materials in the Junior High Schools of Salt Lake City School District" (Unpublished Master's Thesis, University of Utah, 1967), p. 36.

³⁸Charles William Severns, "The Audiovisual Education Program in Springfield, Illinois Public Schools" (Unpublished Master's Thesis, Illinois State University, 1966), p. 123.

³⁹Ibid.

means to the general goal of improved learning, an audio-visual program should be organized to serve this end. Erickson states, "Media must be made available to the teacher at the optimum time for their use and with a minimum of inconvenience."⁴⁰

There is no one best pattern of organization for an audio-visual program. The media should be centralized or decentralized according to potential usage, availability and costs. Seldom used or expensive equipment, materials and services may be centralized at the school or district level in order to reach an optimum number of students and teachers. Inexpensive materials and equipment often should be decentralized to increase their usage through convenience and ready access.⁴¹

Organization of instructional materials in a school may separate print and audio-visual media into a library and audio-visual room or combine and integrate them in an IMC or Learning Resource Center. Although a number of factors in an established system may make separation logical, both librarians and audio-visual media specialists tend to advocate the integration of all instructional media and media services in one facility.⁴² This does not suggest that one person, either librarian or audio-visual specialist, can adequately carry out a program for all types of resources in one school. A position paper from the

⁴⁰Carlton W. H. Erickson, Administering Instructional Media Programs (New York: The Macmillan Company, 1968), p. 64.

⁴¹Ibid.

⁴²Clarence O. Bergeson, "Relationship of Library Science and Audiovisual Instruction," Audiovisual Instruction, Vol. 12, No. 2, (February, 1967), p. 100.

Wisconsin Department of Audio-Visual Instruction suggests that a school Learning Resource Center requires two qualified people, a librarian and an audio-visual specialist.⁴³

In 1965 Forbes drafted a plan for instructional materials centers for secondary schools in Farmingdale, New York.⁴⁴ As a basis for his recommendations he carefully examined the ten then most recent textbooks in the audio-visual field.⁴⁵ He reported areas of agreement among the authors for a number of audio-visual principles. All ten agreed that an audio-visual center in a school should include collections of films, filmstrips, tape recordings, slides, transparencies, pictures, information on field trips, and community resources. They also agreed that audio-visual materials should be adequately catalogued.⁴⁶ Whether instructional materials are separated into print and audio-visual divisions or integrated in one facility, all materials should be catalogued.

An effective audio-visual program should be deliberately organized to involve teachers. They should participate in planning,

⁴³The Wisconsin Department of Audio-Visual Instruction, "The Role of School Librarians and Audiovisual Specialists," Audiovisual Instruction, Vol. 13, No. 4, (April, 1968), p. 379.

⁴⁴George W. Forbes, "A Plan for the Establishment and Organization of an Audio-Visual Instructional Materials Center for the Secondary Schools of Farmingdale, New York" (Unpublished Doctoral Dissertation, School of Education of New York University, 1965).

⁴⁵See Appendix G.

⁴⁶Forbes, op. cit., p. 30.

producing and evaluating instructional materials.⁴⁷ Forbes found that the ten audio-visual texts agreed that teachers should play a part in determining materials and equipment for purchase, and that the audio-visual program should include a faculty advisory committee.⁴⁸

The Hall-Dennis report (1968) stresses the need to establish learning and not teaching as the focus within schools. It specifically recommends that pupils should be trained in the use of media for independent study purposes.⁴⁹ If audio-visual materials are to be used effectively for independent study, then students must have access to them. However, Forbes reported that only three out of ten textbooks written between 1951 and 1962 suggested that audio-visual media should be made available to students.⁵⁰ It is quite probable that the past few years have seen a trend toward more student use of media.

Facilities for an Audio-Visual Program

Facilities for the use of audio-visual media are the physical structures and environment in which the materials and equipment may be used. The Hall-Dennis Report states, "The Ontario student has a right to a school environment that reflects the age in which he lives."⁵¹

⁴⁷E. M. Hall and L. A. Dennis, Living and Learning: the Report of the Provincial Committee on Aims and Objectives in the Schools of Ontario (Toronto, Newton Publishing Co., 1968), p. 144.

⁴⁸Forbes, op. cit., p. 24.

⁴⁹Hall and Dennis, op. cit., p. 186.

⁵⁰Forbes, op. cit., p. 24.

⁵¹Hall and Dennis, op. cit., p. 89.

This suggests a well designed and fully equipped building. However, there is no suggestion that a new building is necessary for a successful modern learning climate. In 1965, the Ontario Curriculum Institute in a publication called Technology in Learning made this pertinent comment, "Lack of progress in the use of technology is being rationalized on the basis of a need for modern building facilities."⁵² Although facilities for media use should be carefully planned when designing new schools, equally diligent work must take place to adapt present buildings and facilities.

Trump and Baynham state that the design of the building should reflect the educational plan of the school.⁵³ Erickson recommends that media facilities and learning spaces should be flexible enough to accommodate individual study, team teaching, personal guidance of student activity, as well as services required for media use in direct and indirect instructional roles.⁵⁴

In 1961, Trump and Baynham suggested

School facilities will provide for use of television, radio, disc recordings, video and audio tape recordings, films and slides, mock-ups, models, museum materials and many kinds of printed materials--books, pamphlets and periodicals.⁵⁵

⁵²Ontario Curriculum Institute Committee on Instructional Aids and Techniques, Technology in Learning (Ontario Curriculum Institute, 1965), p. 9.

⁵³J. Lloyd Trump and Dorsey Baynham, Guide to Better Schools (Chicago: Rand McNally and Company, 1961), p. 38.

⁵⁴Erickson, op. cit., p. 177.

⁵⁵Trump and Baynham, op. cit., p. 38.

A 1966 report published by the Department of Audiovisual Instruction in collaboration with the Center for Architectural Research states "Planners must recognize the impact of media on education and develop facility types that will support and extend their contribution to effective learning."⁵⁶

The classroom is the most basic learning space within today's schools. Facilities for the use of media in the classroom can be simple, inexpensive, and efficient, when carefully planned. First, light control is a basic facility for media use. Different types of projectors require varying amounts of light control. In general, ". . . classrooms need to be darkenable to the point where only 1/10 footcandle of illumination falls on the screen."⁵⁷ This will allow effective use of all projection equipment. If students are expected to take notes during a projected presentation, a minimum light level of one footcandle is required in the writing area. This can best be accomplished by a dimming system on an artificial light source which is shielded from the screen.⁵⁸

The projection surface is another basic facility for the use of media in the classroom. The first of several variables for this facility is the type of surface. Before choosing a surface, the shape

⁵⁶Allan C. Green (ed.), Educational Facilities with New Media (Washington: Department of Audiovisual Instruction, National Education Association in collaboration with Center for Architectural Research, Rensselaer Polytechnic Institute, 1966), p. B-3.

⁵⁷Erickson, op. cit., p. 190.

⁵⁸Ibid., p. 195.

and size of room, money available and quality of image required, should all be considered. Glass-beaded screens deliver a bright picture to a narrow observation angle of 40° to 50° . Matte white finishes have the advantages of economy and a wider viewing angle, 60° , but do not project as bright an image. Silver lenticular screens have greater reflecting power than glass-bead and a wide observation angle, 90° . However, they are more costly and must be rigidly stretched for viewing.⁵⁹ A classroom screen should be mounted high enough so that the bottom of the screen does not go below pupils' head levels. It should be mounted on brackets or hung from the ceiling fifteen to twenty-six inches from the wall so that the screen may be tilted to eliminate keystoneing. Although both corner and front mounted screens are quite acceptable, Erickson suggests that if one screen is used, it should be at front center.⁶⁰ The minimum size of screen is usually recommended thus: the width of the picture should be approximately the same number of feet as one-sixth of the distance from the screen to the last row of seats.⁶¹ This would call for a minimum of sixty inches of width, preferably seventy-two inches, in the average classroom. Rear screen projection may be used with normal room lighting; however, it requires more space, and is at present quite costly. Small rear screen units suitable for individual student viewing in carrels or other independent study situations are quite practicable.

⁵⁹Ibid., p. 197.

⁶⁰Ibid., p. 206.

⁶¹Ibid., p. 198.

Acoustical facilities in a classroom usually involve an attempt to subdue classroom noise and improve sound quality. Acoustical ceiling tile is a minimum requirement; carpeted floors are highly desirable.⁶²

Adequate ventilation, which is important for all classrooms, should be planned to facilitate projection. The room darkening facilities should not interfere with air movement in order to maintain a flow of fifteen cubic feet of air per minute per pupil, with temperature and humidity constant.⁶³

For minimal electrical facilities, each classroom should have three, double, 2000 watt-capacity electrical outlets located on the front, rear and one side wall to accommodate a variety of media positions.⁶⁴

The classroom which is equipped for utilization of audio-visual media has several distinct advantages over the audio-visual projection room concept. Students are not moved and disrupted; teachers are not inconvenienced; audio-visual media can be used in any number of situations at one time; and the audio-visual media can be more easily used as an integral part of the curriculum. It is quite likely that an audio-visual projection room, at a probable cost of about \$20,000 is false economy when compared to equipping the classrooms.⁶⁵

⁶²Ibid., p. 210.

⁶³Ibid.

⁶⁴Ibid., p. 195.

⁶⁵Ray Tisdale, "An Inquiry into the Effectiveness, Use, and Administration of Audio-Visual Materials in the Lake View Elementary Schools" (Unpublished Master's Thesis, Sull Ross State College, Texas, 1962), p. 17.

The trend toward more independent learning has increased the need for facilities for individual study. A variety of systems are commonly used.

The actual study unit may be an enclosed or semi-enclosed carrel, with or without electronic devices which can be commercially bought or "home-built" and sometimes it can accommodate more than one student. Study units may also include cubicles, enclosed rooms, special equipment and seat units, tables and chairs, lounge chairs, built-in seating, or any other unit which provides the particular functions a student needs to work, study, and learn by himself.⁶⁶

Whatever the type of facility for individual study, it should be fully accessible to students, adaptable to changes in the instructional program, and capable of accommodating audio-visual as well as print media.

Financing an Audio-Visual Program

Although the success of an audio-visual program should be measured in terms of contributions to the instructional program of the school and not dollars and cents, it is naive to believe that audio-visual services can function effectively without adequate financial support. Sister Mary Richardine Quirk reported that 155 or 59 per cent of a sample of Catholic schools across the United States reported insufficient funds available for their audio-visual programs.⁶⁷ Godfrey reported that out of 247 superintendents from across the United States, 38 per cent felt they lacked money for an adequate program.⁶⁸ In both

⁶⁶Green, op. cit., p. B-21.

⁶⁷Quirk, op. cit., p. 136.

⁶⁸Godfrey, op. cit., p. 68.

cases this ranked as the most frequently reported problem.

School Management compared the cost of audio-visual instruction over the school years from 1962-63 to 1968-69 in some 1200 schools across the United States. They found that the median audio-visual expenditure per pupil in 1962-63 was \$1.91 rising to \$3.98 in 1965-66 and remaining at about that level, with \$3.96 being spent in 1968-69.⁶⁹ Although no information is given about how schools were selected for the study, nevertheless there is a clear indication of increased spending for audio-visual programs.

How should a financial plan be formulated for upgrading an audio-visual program? Erickson lists several steps:

- (1) Make a complete survey to determine the present status of facilities, equipment, and materials.
- (2) Ascertain needs for new services.
- (3) Establish priorities for adding new services.
- (4) Establish operational levels based on (a) present status of staff and facilities, (b) improved status, that is, a desirable minimum, or basic level, (c) a five-year growth service level that approximates an "adequacy level".⁷⁰

An audio-visual budget at the school level might be divided into several categories--purchase of equipment, purchase of materials, purchase of expendable and production supplies, rental of materials, maintenance and repair of equipment and materials, salaries, and

⁶⁹_____, "The Cost of Audio-Visual Instruction, 1962-63/1968-69," School Management, Vol. 12, No. 10 (October, 1968), p. 67.

⁷⁰Erickson, op. cit., p. 546.

miscellaneous items. In some schools a separate category for building alterations would be needed.

Personnel

Terms for persons working with educational media are far from uniform. A professional in the field, that is, an educator with recognized media training, is usually called a media specialist, although the term media advisor is also used. The term "audio-visual coordinator" is most often used to designate the person responsible for operation of the audio-visual program at the school level. He may or may not have specialized media training. The technician, usually not an educator, is involved in maintenance of equipment and/or production of materials.

The Hall-Dennis report calls upon school staffs to designate an audio-visual coordinator within each school⁷¹ at the same time acknowledging that this is gradually taking place. The report goes on to suggest that by acquiring technicians, schools turn the teacher's concern away from the hardware toward the educational aspects of media use.⁷² Thus the teacher is freed to design materials and plan learning experiences suited to the particular needs of his students.

The Educational Media Association of Canada Guidelines separate media personnel into two categories, media advisors and media technicians. The term "media advisor", corresponds closely to "audio-visual

⁷¹ Hall and Dennis, op. cit., p. 183.

⁷² Ibid., p. 144.

media specialist". The media advisor has the following responsibilities:⁷³ assisting department heads, teachers and students in the utilization and integration of non-print materials; evaluating and recommending non-print materials for use in the school; setting a budget; supervising purchase of non-print materials and equipment; supervising distribution of materials and equipment; supervising audio-visual technicians; maintaining liaison with outside media sources; participating in planning, developing and evaluating the media program; and participating in professional organizations and formal courses related to media.

The EMAC Guidelines list the following responsibilities for a school media technician:⁷⁴ training teachers and students to operate equipment and prepare materials, producing instructional materials, maintaining media supplies and equipment, and attending regional training sessions.

The EMAC Guidelines propose a full time media advisor for all schools over 300 enrollment, and a media technician for all schools up to 1000 enrollment.⁷⁵

Forbes' study (1965) of ten current textbooks reports all ten agreeing that an audio-visual coordinator should act as a resource person on curriculum, should supervise the selection of materials and

⁷³The Canadian Audio Visual Review, op. cit., p. 29.

⁷⁴Ibid.

⁷⁵Ibid.

equipment, should help teachers utilize materials and should instruct teachers in the operation of equipment.⁷⁶

Erickson refers to a Los Angeles City schools handbook which lists these responsibilities for a school audio-visual coordinator: informs principal about the operation of the program; informs teachers about new media developments and availability of new material; maintains audio-visual liaison among teachers, administrators and audio-visual section; advises teachers on good utilization practices; assists teachers in selection of materials; supervises the ordering of materials; informs teachers of materials in the school; establishes a convenient preview system; schedules equipment and materials; and supervises inventory, storage and maintenance of equipment.⁷⁷

The broad range of responsibilities usually assigned to the audio-visual coordinator, coupled with a lack of technical and clerical help, forces most schools to use student assistants. Whether students are organized as a club, are used during study periods, or simply are called upon on a voluntary basis, a high calibre of student interest and dependability is essential. Formal training programs, quality workmanship, clearly defined responsibilities, proper supervision--all are necessary for a good program and good morale.⁷⁸

⁷⁶Forbes, op. cit., p. 24.

⁷⁷Erickson, op. cit., p. 243.

⁷⁸Ibid., pp. 266-274.

Local Production of Materials

The rationale for local production of instructional materials is found in a statement within the Hall-Dennis Report.

Teachers are not only using ready-made materials, but are also mastering the tools that produce and project them, to provide educational materials of first-hand interest for their pupils.⁷⁹

Teachers in Canada find it especially difficult to obtain materials specifically related to their particular curriculum. At least part of the answer involves production of materials within the school.

A school system in Connecticut instituted a graphic arts center for the following reasons:

1. Teachers must be able to develop their own creative ideas dependent upon their particular teaching approaches, their students, and the subject areas. To do this completely, they must have a service that can design visuals to fit their lesson plans.
2. Too often a teacher attempts to tailor his teaching methods to existent materials.
3. Companies are making good visuals; however, they will never be able to keep up with the unique and specific visuals teachers require in their classrooms.⁸⁰

An audio-visual program must eventually provide facilities and professional assistance for teachers in the local preparation of materials. Erickson says

When a school or school system provides its teachers with convenient facilities for the preparation of their own slides, transparencies, tapes, films, and other instructional materials, it may be said that it has reached a

⁷⁹Hall and Dennis, op. cit., p. 126.

⁸⁰Elizabeth A. Shea, "The Graphic Art Center in a Public School System," Audiovisual Instruction, Vol. 13, No. 4 (April, 1968), p. 356.

high level of maturity in the development of its audio-visual media services.⁸¹

To ensure an effective policy of development and utilization of learning materials, the Hall-Dennis Report recommends that school boards should

Create audio-visual resource centres within each school system which will produce slides, film strips, films, television material, records, overhead transparencies and other audio-visual materials.⁸²

In-Service Education in an Audio-Visual Program

An active in-service program is vital to the successful use of audio-visual media at either a school or district level. It will serve several general purposes--to increase media knowledge and competency among experienced teachers, to acquaint new teachers with local media services and facilities, and to help beginning teachers gain the knowledge and skills required to extend the use of media in the classrooms.

A study of Michigan teachers was conducted by Streeter to discover the relationship between media competency and media use. He concluded that as a teacher's competency in media skills and understanding increased, the frequency with which he uses educational media also increased.⁸³ An active in-service program is a logical avenue to increasing teacher competence in media use.

⁸¹Erickson, op. cit., p. 362.

⁸²Hall and Dennis, op. cit., p. 186.

⁸³Streeter, op. cit., p. 81.

The Hall-Dennis Report, Living and Learning, suggests that teachers as professionals should be expected to use new techniques and developments in educational technology just as a doctor uses them in medicine. This will necessitate a continuous program of in-service courses for both utilizing and producing audio-visual materials.⁸⁴

As in-service education is necessary, the next matter to be considered is the types of activities which should be used to accomplish the objectives of the in-service program. Erickson ". . ." suggests that teachers may be encouraged to participate in one or more of the following under appropriate conditions.

- 1) Study published literature, pamphlets, and textbooks.
- 2) Read locally produced manuals, handbooks, curriculum guides and case studies.
- 3) Plan, write, and/or edit a handbook or bulletin of directions; write up a case for publication and distribution.
- 4) Prepare and give a report.
- 5) Prepare and give a demonstration.
- 6) Produce audio-visual media for unique class situations and teaching purposes.
- 7) Watch demonstrations.
- 8) Listen to speakers.
- 9) View presentations of audio-visual media.
- 10) Evaluate various kinds of media.
- 11) Write detailed teaching plans and teaching units.
- 12) Evaluate teaching plans, case studies, and teaching units.
- 13) Formulate basic principles and apply them.
- 14) Act out a dramatic role.
- 15) Observe other teachers at work.
- 16) Take field trips.
- 17) Evaluate experiences of self and others.
- 18) Plan and conduct a research experiment.
- 19) Teach other teachers.
- 20) Follow directions.
- 21) Conduct surveys.
- 22) Participate in a discussion.

⁸⁴Hall and Dennis, op. cit., p. 144.

- 23) Formulate valid teaching purposes.
- 24) Formulate good thought-provoking questions.
- 25) Fill out questionnaires.
- 26) Operate equipment and handle materials.
- 27) Plan programs for meetings.⁸⁵

Equipment for an Audio-Visual Program

Equipment is the means for presenting materials for implementing learning through media. Although there is a real danger that an audio-visual program can become too equipment-oriented, there is also a real need for good quality, simple to operate equipment for media use.

Living and Learning states

A great array of equipment is now available, and teachers must be well-informed, selective in acquiring what they need, and ready to use various devices, or have pupils use them, when they are advantageous. Hardware which can be used often and effectively as an aid to learning should be regarded not as a luxury but as standard equipment for schools.⁸⁶

Two distinct areas of concern when planning equipment purchases are quality and quantity. The Ontario Curriculum Committee in Technology in Learning recommends that schools use a simple yet comprehensive equipment buying guide in choosing the quality of equipment which they want.⁸⁷ A school could refer to Media Canada's "Equipment Specifications"⁸⁸ or Erickson's "Specific Criteria for Media Equipment

⁸⁵Erickson, op. cit., p. 126.

⁸⁶Hall and Dennis, op. cit., p. 169.

⁸⁷Ontario Curriculum Institute Committee, op. cit., p. 103.

⁸⁸Miller, op. cit., p. 37.

Selection."⁸⁹

Quantitative equipment guidelines for Canadian schools are available in the form of the EMAC Guidelines.⁹⁰ Although each school is unique in its own programs and needs, nevertheless a set of guidelines should offer a basis for decision making.

Materials for an Audio-Visual Program

"School boards must ensure that pupils and teachers have access to materials and resources that are current."⁹¹ While the validity of the statement cannot be questioned, it should be noted that problems do exist in this area. Audio-visual materials which are oriented to specific aspects of current curricula are not often readily available. There is a pronounced dearth of materials with a Canadian viewpoint.

Materials for an audio-visual program might be classified according to three distinct types of sources--free and inexpensive materials, commercially produced materials and locally produced materials. In an attempt to meet materials requests from teachers and students, an active audio-visual program will have to utilize all three sources.

Selection and evaluation of materials must be closely related, taking into account a variety of factors including: appropriateness to curriculum, accuracy, length, validity of learning techniques,

⁸⁹Erickson, op. cit., p. 86.

⁹⁰The Canadian Audio Visual Review, op. cit., pp. 16-23.

⁹¹Hall and Dennis, op. cit., p. 185.

technical quality, availability of other materials, and cost.⁹²

Guidelines for quantities of commercial materials which a school should include in its resource center are stated in the EMAC Guidelines.⁹³ As with equipment guidelines, they should be considered according to each school's unique educational situation.

Major Barriers to an Improved Audio-Visual Program

Most audio-visual programs, regardless of their quality or degree of development, will experience difficulties and problems related to the services they provide. Basic or especially difficult problems might be termed major barriers to an improved program.

The major barriers to the full implementation of audio-visual media are similar to those facing other areas of innovation or change.

Technology in Learning expresses this idea.

Reasons why man does not avail himself of new modes are usually related to his fears and aspirations, his attitudes and cultural inheritance, but rarely to material or financial shortage.⁹⁴

The Brickell study of change in the schools of New York concludes

Our greatest barrier in moving into a new plan for improving New York State education will be our loyalty to the inadequate organizations and arrangements which exist today.

If we can recognize them as being the best we could imagine when we invented them, give them full credit

⁹²Erickson, op. cit., p. 70.

⁹³See Appendix A.

⁹⁴Ontario Curriculum Institute Committee, op. cit., p. 70.

for what they have accomplished and then move on to something better, New York State can maintain its long established leadership in education.⁹⁵

A large part of the publication Graphic Communication and the Crisis in Education is devoted to the identification of barriers to an improved audio-visual media program. Among the inhibiting factors listed are: difficulties in operating equipment, buildings not designed for media use, lack of suitable materials, high costs of production, difficulties in locating and obtaining materials, difficulties in integrating other materials with a course based upon a textbook, lack of time for use of audio-visual materials, negative reaction of teachers, snobbery of the book and the lecture, a lack of knowledge how to best use audio-visual materials, inadequate preservice training, the need for demonstrations of media use, lack of dissemination of research findings and a lack of support from the media industry.⁹⁶

Evaluation of an Audio-Visual Program

An audio-visual program like any other aspect of education should begin with specific objectives. It is entirely logical that an attempt must be made to measure the relative accomplishment of these objectives. Because objectives will be reached in a variety of ways and at different times, the evaluation process must be varied and more or less continuous.

⁹⁵Henry M. Brickell, Organizing New York State for Educational Change (The University of the State of New York, 1961), p. 102.

⁹⁶Neal E. Miller (ed.), Graphic Communication and the Crisis in Education (Department of Audio-Visual Instruction, National Education Association, 1957), pp. 3-58.

This does not mean a lack of organization; in fact, the evaluation should be carefully structured and planned.

Erickson states that evaluation of an audio-visual program will not only reveal ways to improve media services, but also will result in personal media growth for those involved.⁹⁷ He goes on to suggest that there are several possible systems of evaluation--self analysis check lists, anecdotal records, opinion forms for teachers and pupils, and rating scales. Emphasis in the evaluative process must consciously be placed upon qualitative as well as quantitative goals.⁹⁸ A comprehensive list of criteria from an audio-visual authority such as that found in Erickson⁹⁹ would make a useful basis for evaluating an audio-visual program. It is quite probable that any effective program of evaluation will result in an expansion of media services.

Expansion Plans for an Audio-Visual Program

To assume that all audio-visual programs should be expanding, is perhaps too simple, for an improved service should not be equated with expansion. However, because of the rapid changes in the field of audio-visual media, "expansion" probably has the proper import. The increase in types and varieties of materials, changes in curricula, new schools built for media use, and changes in the role of the media specialist--

⁹⁷Erickson, op. cit., p. 599.

⁹⁸Ibid., p. 600.

⁹⁹Ibid., p. 603.

all of these phenomena point to a growing importance for audio-visual media.¹⁰⁰

III. SUMMARY

A survey of the research and literature indicates that high school audio-visual programs should consider the following:

1) Organization. No one organizational pattern is superior. Because of differing conditions, educational media may be centralized or decentralized within a school or system, and print and audio-visual materials may or may not be integrated. Organization of a media program should reflect the need for optimum availability of media to students and teachers.

2) Facilities. Schools should be planned and/or altered to accommodate the use of media. Classrooms should have darkening facilities, a suitable screen, adequate ventilation, acoustical treatment, and sufficient electrical outlets. Audio-visual projection rooms are not practical. Independent study facilities should be provided.

3) Finance. Past studies indicate lack of finances as a common problem in audio-visual programs. A series of carefully prepared long range plans should be the basis for audio-visual budgeting.

4) Personnel. The Media Specialist, an educator, should be responsible for professional development of the program. The media technician, usually not an educator, takes charge of production and

¹⁰⁰Ontario Curriculum Institute Committee, op. cit., p. 81.

maintenance. Student assistants can make a worthwhile contribution to an audio-visual program.

5) Local Production. Because teachers want materials specifically suited to their own situation, extensive local production is imperative.

6) In-Service Education. Teacher use of materials increases with teacher competency; an in-service program can give this competency. In such a rapidly changing field, an in-service program is essential.

7) Equipment. Standards for quality and quantity of equipment must be considered. However, they should not be rigid.

8) Materials. Schools will have to draw on all possible sources of materials to meet teacher demands. Canadian guidelines are available for materials standards.

9) Barriers. Most factors which impede the development of an audio-visual program are a result of a conservative attitude of the people involved rather than financial limitation.

10) Evaluation. A continuous, flexible system of evaluation is imperative if attainment of objectives is to be measured.

11) Expansion. Evolutionary development of an audio-visual program is probable because of growth and improvements in the field.

CHAPTER III

DESIGN OF THE STUDY

The purposes of this study were to establish the status of audio-visual programs in Saskatchewan high schools, to compare this status with the EMAC Guidelines and to make recommendations based upon an analysis of the findings. This chapter explains the procedures used to carry out this study--selecting the population, designing the questionnaire, collecting the data and treating the data.

I. SELECTING THE POPULATION

In order to establish the status of audio-visual programs in Saskatchewan high schools, it was decided to survey all schools in the province, public and private, which enrolled grades 10, 11 and 12, regardless of the size of enrollment or other grades in the school. All data were requested for these three grades only.

As most of the items were related to instructional media, they might have been answered most readily by an audio-visual coordinator or librarian. However, it was recognized that many high schools would not have persons filling these positions. For this reason, each questionnaire was mailed to the principal with a request that he, or a person selected by him, should complete it.

The names of all schools enrolling grades 10, 11 and 12 were taken from a list prepared by the School Libraries Division of the

Department of Education in Regina. Of the 339 questionnaires mailed to Saskatchewan high schools, 306 (90.3 per cent) were completed and returned. These schools enrolled 47,993 high school students in 1,896 classes with 2,632 high school teachers.

II. DESIGNING THE QUESTIONNAIRE

Following careful study of a number of survey instruments used in other studies of audio-visual programs, a questionnaire outline was developed. Good's Introduction to Educational Research¹ provided a useful reference. Specific items were developed to obtain information in order to formulate answers for the list of questions which constitute the statement of the problem. The items of the questionnaire were critically evaluated by twelve students in a graduate level audio-visual class, titled "The Organization and Supervision of the Audiovisual Media Programs," at the University of Alberta. Three audio-visual coordinators, actively working in Edmonton schools, completed the questionnaire and offered suggestions for revision. After final revision took place in consultation with the thesis committee, the four page, 155 question instrument was printed by photo reduction offset process.

¹Carter V. Good, Introduction to Educational Research (New York: Appleton-Century-Crofts, 1963).

III. COLLECTING THE DATA

The questionnaire² was mailed to 339 Saskatchewan high schools on March 10, 1969. Accompanying the survey instrument were two cover letters. The first letter,³ from the author of this study, explained the purpose and importance of the study. The second letter,⁴ endorsed by Saskatchewan's Chief Superintendent of Schools and the Supervisor of the Visual Education Branch of the Saskatchewan Department of Education, urged all schools to participate.

On March 17, 1969, a postcard reminder⁵ was mailed to all schools which had not returned a completed questionnaire. A second copy of the questionnaire along with a cover letter⁶ urging participation were mailed to all non-respondents on March 27, 1969.

IV. TREATMENT OF THE DATA

After the forms were completed and returned, four enrollment groups were established, 1-100, 101-200, 201-500 and over 500. Each completed questionnaire was placed in an enrollment group and assigned an identification number. The identification numbers were for computer purposes only. The data were transferred by hand

²See Appendix B.

³See Appendix C.

⁴See Appendix D.

⁵See Appendix E.

⁶See Appendix F.

from the questionnaires to data sheets. From the data sheets, the information was punched on computer cards by a keypunch operator.

The items were divided into multiple choice and numerical response groups for programming. For each of the 108 multiple choice items, numerical sums and percentages of schools responding were calculated. This information was tabulated by enrollment groups and by organizational patterns. A small number of items, considered appropriate by the writer, were tabulated by the position of the person who completed the questionnaire. For each of the forty-three numerical response items, calculations were made for total number of responses and the numbers of responses on a per school, per class and per pupil basis. These data were tabulated by enrollment groups and by organizational patterns.

When the data for the numerical items were tabulated for all 306 schools, the unusually high number of materials per pupil in some instances indicated that some answers had not been prorated, as requested, for grades 10, 11 and 12. In order to obtain data with a minimum possibility of prorating error, the eighty-five schools with only grades 9 to 12 and 10 to 12 were selected.⁷ The data for the forty-three items which required numerical responses were recalculated and tabulated for these eighty-five schools. This treatment of the data was used to minimize or eliminate the prorating error.

All calculations were carried out by the University of Alberta IBM 360/67 Computer.

⁷"Selected" as it refers to the high schools in this study, refers to all eighty-five high schools comprising grades 9, 10, 11 and 12 and those comprising grades 10, 11 and 12.

V. SUMMARY

All Saskatchewan high schools, i.e. schools enrolling all of grades 10, 11 and 12, were included in the population. A questionnaire was developed to meet the specific questions of the study and refined through consultation with audio-visual media specialists. Of the 339 questionnaires which were mailed to Saskatchewan high school principals, 306 were completed and returned. The data were calculated and tabulated by enrollment groups and organizational patterns. Numerical response items were recalculated for the eighty-five schools which enrolled only grades 9 to 12 or 10 to 12.

CHAPTER IV

REPORT OF THE FINDINGS

Data representing the status of audio-visual programs in Saskatchewan high schools are tabulated and summarized in this chapter. The information is presented under the same headings as the survey instrument. They are general information, organization, facilities, budget, personnel, local production of materials, in-service training, materials, equipment, barriers to an improved audio-visual program, evaluation, and future plans.

I. GENERAL INFORMATION

Completed questionnaires were returned by 306 or 90.3 per cent of the 339 Saskatchewan high schools included in the survey.

Of the responding schools, 240 or 78.4 per cent classified themselves as academic, 4 or 1.3 per cent as vocational and 62 or 20.3 per cent as composite. The schools were divided into four groups according to enrollment. One hundred eighty-one or 59.2 per cent of the responding schools had an enrollment from 1 to 100, 70 or 22.9 per cent had an enrollment between 101 and 220, 36 or 11.8 per cent between 201 and 500 students, and 19 or 6.2 per cent of the schools had an enrollment in excess of 500.

Table I indicates the average number of pupils, high school classes and teachers in each of the four enrollment groups.

TABLE I
AVERAGE NUMBER OF PUPILS, HIGH SCHOOL CLASSES AND TEACHERS
PER SCHOOL, BY ENROLLMENT GROUPS

Average Number Per School	Enrollment Groups			
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)
Pupils	60.6	165.9	320.3	730.5
High School Classes	3.2	6.0	12.4	24.0
Teachers	3.9	8.0	17.0	39.6

The positions of the persons who completed the questionnaires are reported in Table II. Two hundred twenty or 72.1 per cent of the forms were completed by principals. Only in Group IV schools was the number of AV coordinators who completed the form greater than the number of principals who did so. Of the 11 "Others", 3 were teachers, 1 was a teacher's aide and the remainder were completed jointly by principals, AV Coordinators and/or librarians.

II. ORGANIZATION

In accordance with their response to an item, the 306 Saskatchewan high schools were placed in four organizational categories as reported in Table III. While 36.8 per cent of the schools in enrollment Group IV were served by a district IMC with an AV media specialist, only 4.4 per cent of the schools in Group I had this service. The two groups of schools with greater enrollments had a higher proportionate number of district AV facilities and services. It should be noted, however, that

TABLE II
THE POSITION OF THE RESPONDENTS, BY ENROLLMENT GROUPS

Position of Respondents	Enrollment Groups				Total	
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)		
	Number	Number	Number	Number	Number	Per cent
Principal	143	48	21	8	220	72.1
AV Coordinator	18	12	9	9	48	15.7
Librarian	4	2	2	0	8	2.6
Vice-principal	12	3	2	1	18	5.9
Other	4	4	2	1	11	3.7
TOTAL	181	69	36	19	305	100.0

TABLE III

ORGANIZATION PATTERN OF AV SERVICES AVAILABLE, BY ENROLLMENT GROUPS

Organizational Patterns	Enrollment Groups				Total	
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)		
	Number	Per cent	Number	Per cent	Number	Per cent
Served by a district IMC with AV media specialist	8	4.4	2	2.9	6	16.7
Served by a district IMC without AV media specialist	13	7.2	5	7.1	6	16.7
Served by a building IMC only	25	13.8	10	14.3	6	16.6
Served by neither building nor district IMC	135	74.6	53	75.7	18	50.0
TOTAL	181	100.0	70	100.0	36	100.0
					19	100.0
					23	7.5
					27	8.8
					46	15.1
					210	68.6

210 or 68.6 per cent of all the schools had neither district nor building IMC facilities.

Coordination of audio-visual programs in the high schools occurred most often through the AV coordinator, 42.1 per cent, or the principal's office, 31.5 per cent. Table IV shows the tendency for schools in Groups I and II enrollment to coordinate the program through the principal's office and schools in Groups III and IV to coordinate the program through the AV Coordinator or the library. Fifteen of the twenty "Other" respondents coordinated the programs jointly through the principal's office, AV coordinator and/or library.

AV committees were used in 40 or 13.1 per cent of 305 schools. As seen in Table V, 23 or 12.8 per cent of Group I schools, 9 or 12.9 per cent of Group II schools, 3 or 8.3 per cent of Group III schools, and 5 or 26.3 per cent of Group IV schools reported the existence of AV committees. Table VI shows that 34.8 per cent of the schools which were served by district IMC's with AV media specialists had AV committees, while 18.5 per cent of the schools served by district IMC's without AV media specialists used AV committees.

As seen in Table VII, the most common location for AV materials was the library, as reported by 117 or 38.6 per cent of the schools. Only one of fifty-five schools with enrollments over 200 students decentralized materials to the classrooms. These schools did make some use of subject area offices for this purpose. Of the 303 respondents to this item, 93 or 30.7 per cent were "Other". The location of AV materials in these schools was specified as follows: twenty-four in staff rooms, seventeen in supply rooms, sixteen in school offices,

TABLE IV

SOURCE OF COORDINATION FOR HIGH SCHOOL AUDIO-VISUAL PROGRAMS,
BY ENROLLMENT GROUPS

Source of Coordination	Enrollment Groups						Total	
	I (1-100)		II (101-200)		III (201-500)		IV (Over 500)	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Principal's Office	63	35.2	21	30.0	11	31.4	0	0.0
AV coordinator	69	38.5	32	45.7	14	40.0	12	66.7
Library	6	3.4	4	5.7	6	17.2	2	11.1
Subject areas	5	2.8	2	2.9	0	0.0	1	5.5
Not coordinated	29	16.2	3	4.3	2	5.7	0	0.0
Other	7	3.9	8	11.4	2	5.7	3	16.7
TOTAL	179	100.0	70	100.0	35	100.0	18	100.0

TABLE V

NUMBER OF AV COMMITTEES, BY ENROLLMENT GROUPS

	Enrollment Groups						Total			
	I (1-100)		II (101-200)		III (201-500)		IV (Over 500)			
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent		
Number of AV committees	23	12.8	9	12.9	3	8.3	5	26.3	40	13.1

TABLE VI

NUMBER OF AV COMMITTEES, BY ORGANIZATIONAL PATTERN OF AV SERVICE

Organizational Pattern Based Upon the Type of AV Service Available to the School									
No IMC		Building IMC Only		District IMC. No AV Media Specialist		District IMC With AV Media Specialist		Total	
Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
23	11.0	4	8.9	5	18.5	8	34.8	40	13.1
Number of AV committees									

TABLE VII
LOCATION OF AV MATERIALS, BY ENROLLMENT GROUPS

Location of AV Materials	Enrollment Groups				Total	
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)		
	Number	Per cent	Number	Per cent	Number	Per cent
Library	72	40.2	21	30.4	15	41.7
Classrooms	22	12.3	11	15.9	1	2.8
AV room	25	14.0	12	17.4	7	19.4
Subject area offices	7	3.9	1	1.5	2	5.6
Other	53	29.6	24	34.8	11	30.5
TOTAL	179	100.0	69	100.0	36	100.0
					19	100.0
					303	100.0

five in teacher work rooms, and two in each of resource centers, auditoriums, unit offices, and hallways. The remaining 23 "Other" responses specified materials were located in two or more of the library, AV room, classrooms and subject area offices.

AV materials were catalogued in 145 or 47.7 per cent of the schools. Table VIII reveals that 82 or 42.2 per cent of the Group I schools and 29 or 41.4 per cent of the Group II schools catalogued AV materials, compared with 17 or 89.5 per cent of the Group IV schools. AV materials were catalogued in the library of 95 or 31.3 per cent of the schools and in the AV room of 16 or 5.3 per cent of the schools. The 34 or 11.2 per cent "Other" responses included 10 which specified the principal's office, 6 the staff room, and the remainder were combinations of the library, AV room, office, staff room, and store room.

The information recorded in Table IX describes the organization of Saskatchewan high schools with respect to student access to AV materials. Schools allowing access to AV materials on the same basis as books were only 26 or 8.6 per cent in number. The percentage of schools with this type of access to materials was greater in Groups III and IV. Little or no access to AV materials for students was reported by 40 or 57.1 per cent of the Group II schools, but only 2 or 10.5 per cent of the Group IV schools. The schools which reported student access to AV materials on a supervised basis numbered 134 or 44.2 per cent. Thirteen of the nineteen Group IV schools were included in this group.

TABLE VIII
CATALOGUING OF AV MATERIALS, BY ENROLLMENT GROUPS

	Enrollment Groups						Total	
	I (1-100)		II (101-200)		III (201-500)		IV (Over 500)	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Cataloguing of AV Materials								
In the Library	51	28.3	21	30.0	12	34.3	11	57.9
In the AV Room	7	3.9	4	5.7	3	8.5	2	10.5
Not catalogued	104	57.8	41	58.6	12	34.3	2	10.5
Other	18	10.0	4	5.7	8	22.9	4	21.1
TOTAL	180	100.0	70	100.0	35	100.0	19	100.0
							304	100.0

TABLE IX
STUDENT ACCESS TO AV MATERIALS, BY ENROLLMENT GROUPS

Student Access to AV Materials	Enrollment Groups				Total	
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)		
	Number	Per cent	Number	Per cent	Number	Per cent
Access to AV materials on same basis as books	11	6.2	5	7.2	6	16.7
Access to AV materials when supervised	80	44.9	25	35.7	16	44.4
Little or no access to AV materials	87	48.9	40	57.1	14	38.9
TOTAL	178	100.0	70	100.0	36	100.0
					19	100.0
					26	8.6
					134	44.2
					143	47.2
					303	100.0

III. FACILITIES

Physical facilities for the use of audio-visual media in Saskatchewan high schools are described in Tables X and XI.

As shown in Table X, only three facilities, the library (88.2 per cent) central sound system (28.2 per cent) and AV projection room (26.2 per cent) were reported by more than one-quarter of the 306 schools. For most of the items listed in Table X, the percentage of schools having the facility increases for schools in Groups III and IV. In Group I, only one facility, the library, was reported in more than one-quarter of the schools, whereas in Group IV all but one facility, the TV studio, were reported in more than one-quarter of the schools.

Light control, wall screens and electrical outlets are described in Table XI in terms of the percentage of classrooms having each facility. Sixty-nine or 24.8 per cent of the schools reported no classrooms with adequate light control for the use of a 16 mm projector. Another 107 or 38.5 per cent of the schools reported that from 1 per cent to 25 per cent of their classrooms had this degree of light control. There is no consistent pattern as to the relationship of the number of classrooms having light control to the enrollment groups.

Two hundred six or 77.4 per cent of the schools had less than one-quarter of their classrooms equipped with adequate screens. The schools in Group IV had proportionately more screens than the schools in other groups. Three or more electrical outlets were available in 75 per cent to 100 per cent of the classrooms in 115 or 41.8 per cent of the schools. Unlike most other facilities, the percentage of classrooms

TABLE X

FACILITIES FOR THE USE OF AV MEDIA, BY ENROLLMENT GROUPS

Facilities	Enrollment Groups				Total	
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)		
	Number	Per cent	Number	Per cent	Number	Per cent
Library	152	84.4	63	90.0	35	97.2
AV projection room	40	22.2	21	30.0	9	25.0
AV office space	20	11.1	3	4.3	5	13.9
Darkroom	9	5.0	10	14.3	14	38.9
Conduit for closed circuit TV	7	3.9	3	4.3	4	11.1
Television studio	3	1.7	1	1.4	2	5.6
Wired carrels	0	0.0	1	1.4	3	8.3
Central sound system built to distribute recordings or radio broadcasts	30	16.7	22	31.4	20	55.6
					14	73.7
					269	88.2
					80	26.2
					33	10.8
					44	14.4
					21	6.9
					8	2.6
					11	3.6
					86	28.2

TABLE XI

PERCENTAGE OF CLASSROOMS EQUIPPED FOR AV MEDIA USE, BY ENROLLMENT GROUPS

Facilities and % of Classrooms		Enrollment Groups				Total
		I (0-100)	II (101-200)	III (201-500)	IV (Over 500)	
		Number Per cent	Number Per cent	Number Per cent	Number Per cent	
Light Control for 16 mm	0%					
	1 - 25%	47 29.2	18 26.5	3 9.4	1 5.9	69 24.8
	26 - 50%	57 35.4	29 42.7	17 53.1	5 29.4	108 38.9
	51 - 75%	12 7.5	5 7.3	5 15.6	2 11.8	24 8.6
	76 - 100%	10 6.2	5 7.3	1 3.1	2 11.8	18 6.5
		35 21.7	11 16.2	6 18.8	7 41.1	59 21.2
TOTAL		161 100.0	68 100.0	32 100.0	17 100.0	278 100.0
60" x 60" or larger screens	0%					
	1 - 25%	58 36.5	25 42.4	10 33.4	1 5.6	94 35.3
	26 - 50%	68 42.8	23 39.0	15 50.0	6 33.3	112 42.1
	51 - 75%	15 9.4	6 10.1	3 10.0	2 11.1	26 9.8
	76 - 100%	5 3.1	3 5.1	1 3.3	4 22.2	13 4.9
		13 8.2	2 3.4	1 3.3	5 27.8	21 7.9
TOTAL		159 100.0	59 100.0	30 100.0	18 100.0	266 100.0
3 or more electrical outlets	0%					
	1 - 25%	50 30.9	13 21.0	2 6.1	1 5.6	66 24.0
	26 - 50%	30 18.5	12 19.4	5 15.1	9 50.0	56 20.4
	51 - 75%	10 6.2	6 9.6	4 12.1	2 11.1	22 8.0
	76 - 100%	12 7.4	2 3.2	2 6.1	0 0.0	16 5.8
		60 37.0	29 46.8	20 60.6	6 33.3	115 41.8
TOTAL		162 100.0	62 100.0	33 100.0	18 100.0	275 100.0

equipped with sufficient electrical outlets, was not greater for Group IV schools.

IV. BUDGET

Existence of an AV budget was indicated by 150 or 49.7 per cent of the 302 schools which responded to this item. Table XII shows the number of schools with an AV budget by enrollment group. Seventy-nine or 44.1 per cent of the schools in Group I, 33 or 48.5 per cent of the schools in Group II, 21 or 58.3 per cent of the schools in Group III and 17 or 89.5 per cent of the schools in Group IV had AV budgets.

When classified according to organization of AV media services, as shown in Table XIII, the existence of an AV budget was reported by 21 or 91.3 per cent of the schools served by a district IMC with an AV media specialist, compared with 14 or 53.8 per cent of the schools served by a district IMC without an AV media specialist, 28 or 62.2 per cent of the schools with only a building IMC, and 87 or 41.8 per cent of the schools with neither district nor building IMC.

The type of AV budgets reported by the schools is presented in Table XIV. An independent AV budget was reported by 62 or 37.8 per cent of the schools, while 53 or 32.3 per cent reported it as part of a library budget, and 43 or 26.2 per cent reported it as part of the overall instructional budget. Group IV schools reported the largest proportion of independent AV budgets, 10 schools or 58.8 per cent, and Group I schools had the largest proportion of AV budgets integrated with the library, 37 or 41.6 per cent of the schools.

TABLE XII
NUMBER OF SCHOOLS WITH AV BUDGETS, BY ENROLLMENT GROUPS

	Enrollment Groups				Total	
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)		
	Number	Per cent	Number	Per cent	Number	Per cent
Number of Schools	79	44.1	33	48.5	21	58.3
					17	89.5
					150	49.7

TABLE XIII
NUMBER OF SCHOOLS WITH AV BUDGETS, BY ORGANIZATIONAL PATTERN OF AV SERVICE

	Organizational Pattern Based Upon the Type of AV Service Available to the School				Total	
	No IMC	Building IMC Only	District IMC. No AV Media Specialist	District IMC With AV Media Specialist		
	Number	Per cent	Number	Per cent	Number	Per cent
Number of Schools	87	41.8	28	62.2	14	53.8
					21	91.3
					150	49.7

TABLE XIV

TYPE OF AV BUDGET, BY ENROLLMENT GROUPS

Type of AV Budget	Enrollment Groups				Total	
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)		
	Number	Number	Number	Number	Number	Per cent
An independent budget	30	13	9	10	62	37.8
Part of the library budget	37	8	6	2	53	32.3
Part of the overall instructional budget	21	14	5	3	43	26.2
Other	1	1	2	2	6	3.7
TOTAL	89	36	22	17	164	100.0

The manner in which Saskatchewan high schools prepared and expended AV budgets is described in Table XV. The percentage of budgets prepared by AV coordinators increased from 6.9 per cent in Group I to 52.9 per cent in Group IV. The part played by principals and AV coordinators in preparing and expending AV budgets was not parallel. The number of principals increased from 22 or 13.7 per cent preparing budgets to 34 or 18.9 per cent expending them, whereas the number of AV coordinators dropped from 22 or 13.7 per cent preparing budgets to 14 or 18.8 per cent expending them. In 22 or 13.7 per cent of the schools individual teachers helped prepare budgets and in 42 or 26.4 per cent of the schools teachers were involved in expending budgets.

For budget preparation, 15 of the 50 "Other" respondents specified that the Unit Board had this responsibility. The remainder were jointly prepared by two or more of principals, AV coordinators, librarians, superintendents and individual teachers. Most of the 34 "Other" responses for expending the budget were similar combinations.

Data for four types of instructional media expenditure were used from eighty-five selected high schools which enrolled only Grades 9 to 12 or 10 to 12.¹ In 1968 the expenditures for AV equipment for forty-nine of the schools which reported this type of budget were \$1.55 per pupil in Group I schools, \$1.41 per pupil in Group II schools, \$3.05 per pupil in Group III schools, and \$2.53 per pupil in Group IV schools. The expenditures for AV materials in fifty schools

¹See page 44.

TABLE XV

MANNER OF PREPARING AND EXPENDING AV BUDGETS, BY ENROLLMENT GROUPS

Preparing and Expending AV Budgets	Enrollment Groups				Total
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)	
	Number Per cent	Number Per cent	Number Per cent	Number Per cent	
Principal	12 13.8	4 11.4	5 22.7	1 5.9	22 13.7
AV Coordinator	6 6.9	4 11.4	3 13.6	9 52.9	22 13.7
Librarian	5 5.7	1 2.9	2 9.1	0 0.0	8 5.0
Office of the Supt.	21 24.2	12 34.3	4 18.2	0 0.0	37 22.9
Individual Teachers	15 17.2	3 8.6	3 13.7	1 5.9	22 13.7
Other	28 32.2	11 31.4	5 22.7	6 35.3	50 31.0
TOTAL	87 100.0	35 100.0	22 100.0	17 100.0	161 100.0
Principal	16 18.5	4 12.5	8 36.4	2 11.1	30 18.9
AV Coordinator	6 6.9	1 3.1	0 0.0	7 38.9	14 8.8
Librarian	7 8.0	1 3.1	0 0.0	1 5.6	9 5.7
Office of the Supt.	18 20.7	8 25.0	2 9.1	2 11.1	30 18.8
Individual Teachers	25 28.7	10 31.3	7 31.8	0 0.0	42 26.4
Other	15 17.2	8 25.0	5 22.7	6 33.3	34 21.4
TOTAL	87 100.0	32 100.0	22 100.0	18 100.0	159 100.0

were \$0.81 per pupil in Group I, \$1.37 per pupil in Group II, \$2.46 per pupil in Group III and \$2.76 per pupil in Group IV schools. Expenditures for AV expendable supplies in the forty-eight schools with this type of budget were \$0.35 per pupil in Group I, \$0.28 per pupil in Group II, \$1.08 per pupil in Group III, and \$1.25 per pupil in Group IV. The expenditures for library books in the seventy-one schools with this type of budget were \$10.29 per pupil in Group I, \$6.07 per pupil in Group II, \$8.31 per pupil in Group III and \$6.22 per pupil in Group IV. A detailed analysis of these figures is presented in Table XVI.

Of the forty-nine schools which reported a budget for AV equipment, 17 or 34.7 per cent spent less than \$1.00 per pupil, another 20 or 40.8 per cent spent between \$1.00 and \$3.00 per pupil, 10 or 20.4 per cent spent between \$3.00 and \$6.00 per pupil, and 2 or 4.1 per cent spent more than \$10.00 per pupil. There was a general tendency in Group III and IV schools to spend more money per pupil for AV equipment, AV materials and AV expendable supplies than schools in Groups I and II.

Twenty-five or 50 per cent of the fifty schools which had AV materials budgets spent less than \$1.00 per pupil; another 15 or 30.0 per cent spent between \$1.00 and \$3.00 per pupil; 7 or 14.0 per cent spent between \$3.00 and \$6.00 per pupil; 3 or 6.0 per cent spent between \$4.00 and \$10.00 per pupil and 2 or 4.0 per cent spent more than \$10.00 per pupil.

Of the forty-eight schools which had a budget for AV expendable supplies, 37 or 77.0 per cent spent less than \$1.00 per pupil; 8 or 16.6 per cent spent between \$1.00 and \$3.00 per pupil, and 3 or 6.3 per cent spent more than \$3.00 per pupil.

TABLE XVI

1968 PER PUPIL EXPENDITURES FOR AV EQUIPMENT, MATERIALS, SUPPLIES,
AND LIBRARY BOOKS, BY ENROLLMENT GROUPS FOR 85 SELECTED SCHOOLS

Expenditure Per Pupil	Enrollment Groups				Total
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)	
	Number Per cent	Number Per cent	Number Per cent	Number Per cent	Number Per cent
AV equipment	\$ 0.00	1 20.0	2 22.2	1 5.3	5 10.2
	0.01 to 1.00	1 20.0	3 33.4	4 20.9	12 24.5
	1.01 to 2.00	1 20.0	1 11.1	6 31.6	12 24.5
	2.01 to 3.00	2 40.0	2 22.2	1 5.3	8 16.3
	3.01 to 4.00	0 0.0	1 11.1	3 15.8	4 8.2
	4.01 to 6.00	0 0.0	0 0.0	3 15.8	6 12.2
	6.01 to 10.00	0 0.0	0 0.0	0 0.0	0 0.0
	Over 10.00	0 0.0	0 0.0	1 5.3	2 4.1
	TOTALS	5 100.0	9 100.0	19 100.0	49 100.0
AV materials	\$ 0.00	0 0.0	1 10.0	2 10.5	3 6.0
	0.01 to 1.00	3 60.0	4 40.0	10 52.7	22 44.0
	1.01 to 2.00	2 40.0	3 30.0	4 21.2	11 22.0
	2.01 to 3.00	0 0.0	1 10.0	0 0.0	4 8.0
	3.00 to 4.00	0 0.0	0 0.0	1 5.2	5 10.0
	4.01 to 6.00	0 0.0	0 0.0	1 5.2	2 4.0
	6.01 to 10.00	0 0.0	1 10.0	0 0.0	1 2.0
	Over 10.00	0 0.0	0 0.0	1 5.2	2 4.0
	TOTALS	5 100.0	10 100.0	19 100.0	50 100.0

TABLE XVI (continued)

Expenditure Per Pupil		Enrollment Groups					Total				
		I (1-100)	II (101-200)	III (201-500)	IV (Over 500)						
		Number	Per cent	Number	Per cent	Number		Per cent			
AV supplies	\$ 0.00	2	40.0	4	44.5	1	5.6	0	0.0	7	12.5
	0.01 to 1.00	3	60.0	4	44.5	14	77.6	9	56.3	30	64.5
	1.01 to 2.00	0	0.0	1	11.0	1	5.6	3	18.8	5	10.4
	2.01 to 3.00	0	0.0	0	0.0	1	5.6	2	12.5	3	6.2
	3.01 to 4.00	0	0.0	0	0.0	0	0.0	1	6.2	1	2.1
	4.01 to 6.00	0	0.0	0	0.0	0	0.0	1	6.2	1	2.1
	6.01 to 10.00	0	0.0	0	0.0	1	5.6	0	0.0	1	2.1
	Over 10.00	0	0.0	0	0.0	0	0.0	0	0.0	0	0.1
	TOTALS	5	100.0	9	100.0	18	100.0	16	100.0	48	100.0
Library books	\$ 0.00	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	0.01 to 1.00	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	1.01 to 2.00	0	0.0	1	6.2	0	0.0	0	0.0	1	1.4
	2.01 to 3.00	2	16.7	1	6.2	2	8.3	1	5.3	6	8.5
	3.01 to 4.00	1	8.3	3	18.8	2	8.3	3	15.8	9	12.7
	4.01 to 6.00	4	33.3	3	18.8	6	25.0	4	21.0	17	23.9
	6.01 to 10.00	3	25.0	7	43.8	9	37.6	9	47.4	28	39.4
	Over 10.00 :	2	16.7	1	6.2	5	20.8	2	10.5	10	14.1
	TOTALS	12	100.0	16	100.0	24	100.0	19	100.0	71	100.0

Seventy-one of the eighty-five schools reported library budgets. Only 1 or 1.4 per cent of the schools spent less than \$2.00 per pupil, 15 or 21.2 per cent of the schools spent between \$2.00 and \$4.00 per pupil; another 17 or 23.9 per cent spent between \$4.00 and \$6.00; 28 or 39.4 per cent spent between \$6.00 and \$10.00 per pupil, and 10 or 14.1 per cent spent more than \$10.00 per pupil. Similar to audio-visual expenditures, schools in Groups III and IV spent more money per pupil for library books in 1968 than schools in Groups I and II.

V. PERSONNEL

Audio-visual Coordinator

AV coordinators were reported in 169 or 57.7 per cent of the Saskatchewan high schools. In Table XVII this figure is broken down into the four enrollment groups, 93 or 54.1 per cent of the Group I schools, 36 or 53.7 per cent of the Group II schools, 23 or 65.7 per cent of the Group III schools and 17 or 89.5 per cent of the Group IV schools had AV coordinators. Division of the 169 schools with AV coordinators according to organization pattern is shown in Table XVIII. Twenty or 87.0 per cent of the schools, which were served by a district IMC with an AV media specialist, had an AV coordinator. Fifteen or 57.7 per cent of the schools which were served by a district IMC without an AV media specialist had an AV coordinator. Twenty-six or 60.5 per cent of the schools which had a building IMC only, had an AV coordinator; and 108 or 54.0 per cent of the schools with no IMC service, had an AV coordinator.

TABLE XVII
NUMBER OF AV COORDINATORS, BY ENROLLMENT GROUPS

	Enrollment Groups				Total	
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)		
	Number	Per cent	Number	Per cent	Number	Per cent
Number of AV coordinators	93	54.1	36	53.7	23	65.7
					17	89.5
					169	57.7

TABLE XVIII
NUMBER OF AV COORDINATORS, BY ORGANIZATIONAL PATTERN OF AV SERVICE

	Organizational Pattern Based Upon the Type of AV Service Available to the School				Total	
	No IMC	Building IMC Only	District IMC. No AV Media Specialist	District IMC With AV Media Specialist		
	Number	Per cent	Number	Per cent	Number	Per cent
Number of AV coordinators	108	54.0	26	59.1	15	57.7
					20	87.0
					169	57.7

The professional audio-visual education of Saskatchewan high school AV coordinators is recorded in Table XIX. One hundred twenty-three or 70.7 per cent of the coordinators had not taken a university credit course in AV education. The AV coordinators with 1 university AV course were found in each of the enrollment groups; however, the persons with 2 or 3 AV courses were concentrated in Group IV. None of the coordinators had more than 3 university AV courses. Those schools which reported "Other training" specified a wide variety of preparation, including a National Film Board course, a Normal School short course, air force training, electronics training, five years commercial television experience and several years school experience and observation.

A study of Table XX reveals the time spent by coordinators on AV duties and the amount of released time which they had to perform these duties. Coordinators who spent from 1 to 5 hours per week for AV duties were reported by 136 or 78.2 per cent of the schools. No time spent on AV duties was reported by 25 or 14.4 per cent of the schools. Of the 13 coordinators who spent more than 5 hours per week on AV duties, 3 or 3.2 per cent were in Group I schools, 3 or 12.5 per cent were in Group III schools, and 7 or 41.2 per cent were in Group IV schools. Released time for coordinators to pursue their AV duties was not widespread. No released time was reported by 135 or 76.3 per cent of the schools. Only 4 or 2.3 per cent of the coordinators had more than 5 hours per week released time for AV duties.

Teaching experience of AV coordinators is reported in Table XXI. A consistent pattern of teaching experience was found in all four

TABLE XIX

FORMAL AV EDUCATION OF AV COORDINATORS, BY ENROLLMENT GROUPS

Formal AV Education of AV Coordinators	Enrollment Groups						Total	
	I (1-100)		II (101-200)		III (201-500)		IV (Over 500)	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
1 university AV course	16	16.5	9	24.3	5	21.7	5	29.5
2 or 3 university AV courses	0	0.0	1	2.7	0	0.0	3	17.6
More than 3 university AV courses	0	0.0	0	0.0	0	0.0	0	0.0
Other	5	5.2	3	8.1	4	17.4	0	0.0
None	76	78.3	24	64.9	14	60.9	9	52.9
TOTAL	97	100.0	37	100.0	23	100.0	17	100.0
							174	100.0

TABLE XX

HOURS PER WEEK OF AV COORDINATOR (1) SPENT ON AV DUTIES AND
(2) RELEASED TIME FOR AV DUTIES, BY ENROLLMENT GROUPS

Hours per Week	Enrollment Groups				Total
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)	
	Number Per cent	Number Per cent	Number Per cent	Number Per cent	
(1) Time spent on AV Duties	75 78.9 2 2.1 0 0.0 1 1.1 17 17.9	31 81.6 0 0.0 0 0.0 0 0.0 7 18.4	20 83.3 3 12.5 0 0.0 0 0.0 1 4.2	10 58.8 3 17.6 2 11.8 2 11.8 0 0.0	136 78.2 8 4.6 2 1.1 3 1.7 25 14.4
TOTAL	95 100.0	38 100.0	24 100.0	17 100.0	174 100.0
(2) Released time for AV Duties	17 17.3 0 0.0 0 0.0 0 0.0 81 82.7	10 25.6 0 0.0 0 0.0 1 2.6 28 71.8	4 16.6 1 4.2 0 0.0 0 0.0 19 79.2	7 43.8 0 0.0 1 6.2 1 6.2 7 43.8	38 21.4 1 0.6 1 0.6 2 1.1 135 76.3
TOTAL	98 100.0	39 100.0	24 100.0	16 100.0	177 100.0

TABLE XXI

TEACHING EXPERIENCE OF AV COORDINATORS, BY ENROLLMENT GROUPS

Teaching Experience of AV Coordinators	Enrollment Groups								Total	
	I (1-100)		II (101-200)		III (201-500)		IV (Over 500)			
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent		
1 year	3	3.1	2	5.1	0	0.0	1	5.9	6	3.4
2 to 5 years	24	24.7	12	30.8	5	20.8	6	35.3	47	26.6
More than 5 years	67	69.1	24	61.5	19	79.2	10	58.8	120	67.8
0	3	3.1	1	2.6	0	0.0	0	0.0	4	2.2
TOTAL	97	100.0	39	100.0	24	100.0	17	100.0	177	100.0

enrollment groups. Most of the Saskatchewan high school AV coordinators, 120 or 67.8 per cent were reported to have more than 5 years of teaching experience. Another 47 or 26.6 per cent had more than 2 years.

AV coordinators were chosen for a variety of reasons as shown in Table XXII. The two most common reasons for choosing an AV coordinator were reported to be interest in AV, 71 or 40.8 per cent, and chance when assigning staff duties, 53 or 30.5 per cent. Most Group IV schools, 11 or 64.7 per cent, chose their AV coordinators because of their interest in audio-visual media. The "Other" responses included the following: 5 schools considered audio-visual coordination as the duty of the vice principal, 3 the duty of the principal, 1 the duty of the librarian and 1 the duty of the school secretary. The remainder specified reasons involving two or more of training, interest, experience, and assignment.

Table XXIII deals with the responsibilities of AV coordinators in Saskatchewan high schools. The responsibilities most often reported for the AV coordinators were consulting with teachers about AV matters in 152 or 85.4 per cent of the schools, and consulting with principals about AV matters in 125 or 72.3 per cent of the schools. AV coordinators in Group IV schools assumed more responsibilities than coordinators in other schools. Only 17 or 17.8 per cent of the AV coordinators produced materials, 16 or 9.3 per cent conducted workshops and demonstrations and 11 or 6.4 per cent made major equipment repairs.

The responsibilities of the AV coordinators are categorized in Table XXIV according to the type of AV service available to the school. AV coordinators in schools served by a district INC tended to provide more services than coordinators in schools without this type of facility.

TABLE XXII

REASONS FOR CHOOSING AV COORDINATORS, BY ENROLLMENT GROUPS

Reasons for Choosing AV Coordinators	Enrollment Groups								Total	
	I (1-100)		II (101-200)		III (201-500)		IV (Over 500)			
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Special training Interest in AV Previous AV experience He did not have a full teaching load By chance when assigning staff duties Other	1	1.0	0	0.0	1	4.2	1	5.9	3	1.7
	35	36.5	18	48.6	7	29.1	11	64.7	71	40.8
	5	5.2	3	8.2	4	16.7	1	5.9	13	7.5
	4	4.2	2	5.4	2	8.3	0	0.0	8	4.6
	37	38.5	6	16.2	9	37.5	1	5.9	53	30.5
TOTAL	14	14.6	8	21.6	1	4.2	3	17.6	26	14.9
	96	100.0	37	100.0	24	100.0	17	100.0	174	100.0

TABLE XXIII

RESPONSIBILITIES OF THE AV COORDINATORS, BY ENROLLMENT GROUPS

		Enrollment Groups						Total	
		I (1-100)		II (101-200)		III (201-500)		IV (Over 500)	
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Responsibilities of the AV Coordinators		78	79.6	35	89.7	22	91.7	17	100.0
Consults with teachers about AV matters		4	4.3	4	10.5	2	8.3	6	35.3
Conducts workshops and demonstrations		66	70.2	28	73.7	17	70.8	14	82.4
Consults with principal about AV matters		12	12.8	5	13.2	6	25.0	10	58.8
Trains and supervises student assistants		35	36.8	19	50.0	13	54.2	16	94.1
Helps teachers select materials		10	10.5	6	15.8	6	25.0	9	52.9
Helps teachers produce materials		4	4.3	5	13.2	1	4.2	7	41.2
Produces materials		39	41.5	16	42.1	18	75.0	15	88.2
Supervises distribution of equipment		48	51.1	23	60.5	13	54.2	14	82.4
Makes minor equipment repairs		5	5.4	1	2.6	4	16.7	1	5.9
Makes major equipment repairs									

TABLE XXIV

RESPONSIBILITIES OF THE AV COORDINATOR, BY ORGANIZATIONAL PATTERN OF AV SERVICES

Organizational Pattern of AV Service Available to the School										Total
Responsibilities of the AV Coordinator	No IMC		Building IMC Only		District IMC. No AV Media Specialist		District IMC With AV Media Specialist			
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent		
Consults with teachers about AV matters Conducts workshops and demonstrations Consults with principal about AV matters Trains and supervises student assistants Helps teachers select materials Helps teachers produce materials Produces materials Supervises distribution of equipment Makes minor equipment repairs Makes major equipment repairs	97	83.6	21	80.8	15	93.8	19	95.0	152	85.4
	7	6.2	1	4.2	3	18.8	5	26.3	16	9.3
	80	70.2	15	62.5	14	87.5	16	84.2	125	72.3
	13	11.4	5	20.8	3	18.8	12	63.2	33	19.1
	46	40.4	15	60.0	11	68.8	11	57.9	83	47.7
	12	10.5	6	24.0	4	25.0	9	47.4	31	17.8
	9	7.9	2	8.3	1	6.2	5	26.3	17	9.8
	50	43.9	15	62.5	8	50.0	15	78.9	88	50.9
57	50.0	17	70.8	10	62.5	14	73.7	98	56.6	
6	5.3	1	4.3	1	6.2	3	15.8	11	6.4	

Student Assistants

Table XXV indicates that the use of student assistants for audio-visual programs in Saskatchewan high schools was not widespread. The 73 or 24.6 per cent of the schools which reported using student assistants were in the following enrollment groups: 39 or 22.2 per cent of the schools in Group I, 15 or 22.1 per cent of the schools in Group II, 7 or 20.0 per cent of the schools in Group III, and 12 or 66.7 per cent of the schools in Group IV.

When classified according to organization of AV media services as shown in Table XXVI, 13 or 59.1 per cent of the schools served by a district IMC with an AV media specialist had student assistants compared with 8 or 29.6 per cent of the schools served by a district IMC without AV media specialist, 15 or 34.1 per cent of the schools with only a building IMC, and 37 or 18.1 per cent of the schools with neither district nor building IMC.

Table XXVII shows how the seventy-three schools used their student assistants. Of the total group, 43 or 55.8 per cent used student assistants only in the classes where they were enrolled. Another 16 or 20.8 per cent excused student assistants from classes when needed. Nine or 11.7 per cent of the schools used student assistants only during spares or study periods. All 9 of the "Other" responses were combinations of those above.

The AV responsibilities assumed by student assistants are reported in Table XXVIII. Of the schools with AV student assistants, 66 or 85.7 per cent of them used students for operation of equipment, 25 or 32.5

TABLE XXV

NUMBER OF SCHOOLS WITH AV STUDENT ASSISTANTS, BY ENROLLMENT GROUPS

		Enrollment Groups				Total					
		I (1-100)	II (101-200)	III (201-500)	IV (Over 500)						
		Number	Per cent	Number	Per cent	Number	Per cent				
Number of Schools		39	22.2	15	22.1	7	20.0	12	66.7	73	24.6

TABLE XXVI

NUMBER OF SCHOOLS WITH AV STUDENT ASSISTANTS, BY ORGANIZATIONAL PATTERN OF AV SERVICE

Organizational Pattern of AV Service Available to the School							Total	
Number of Schools	No IMC		Building IMC Only		District IMC. No AV Media Specialist		District IMC With AV Media Specialist	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
	37	18.1	15	34.1	8	29.6	13	59.1
							73	24.6

TABLE XXVII

MANNER OF USING STUDENT ASSISTANTS, BY ENROLLMENT GROUPS

Manner of Using Student Assistants	Enrollment Groups								Total	
	I (1-100)		II (101-200)		III (201-500)		IV (Over 500)			
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Used only during spares or study periods Used only in class where they are enrolled Excused from classes when needed Other	3	7.0	2	13.3	2	28.6	2	16.7	9	11.7
	29	67.4	9	60.0	2	28.6	3	25.0	43	55.8
	8	18.6	4	26.7	1	14.2	3	25.0	16	20.8
	3	7.0	0	0.0	2	28.6	4	33.3	9	11.7
TOTAL	43	100.0	15	100.0	7	100.0	12	100.0	77	100.0

TABLE XXVIII

RESPONSIBILITIES OF AV STUDENT ASSISTANTS, BY ENROLLMENT GROUPS

Responsibilities of AV Student Assistants	Enrollment Groups						Total	
	I (1-100)		II (101-200)		III (201-500)		IV (Over 500)	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Produce overhead transparencies	3	6.8	1	7.1	0	0.0	3	25.0
Operation of equipment for teachers	36	81.8	14	100.0	6	85.7	10	83.3
Distribution of equipment	8	18.2	8	57.1	5	71.4	4	33.3
Clerical work	3	6.8	2	14.3	1	14.3	2	16.7
Photography	1	2.3	1	7.1	0	0.0	2	16.7
Minor servicing of AV equipment	6	13.6	5	35.7	1	14.3	3	25.0
Dubbing audio tapes	3	6.8	2	14.3	1	14.3	1	8.3
Others	0	0.0	0	0.0	0	0.0	0	0.0

per cent used students for distribution of equipment, and 15 or 19.5 per cent used students for minor servicing of equipment.

VI. LOCAL PRODUCTION OF MATERIALS

The status of local production equipment and materials is shown in Table XXIX. Three pieces of equipment, all of which are office-type devices, were reported in most Saskatchewan high schools. They were the spirit duplicator in 290 or 95.4 per cent of the schools, mimeograph machine in 216 or 71.1 per cent of the schools and thermal process copier in 189 or 62.2 per cent of the schools. Only two other pieces of production equipment, the 35 mm camera in 43 or 14.1 per cent of the schools and mechanical lettering equipment in 39 or 12.9 per cent of the schools were reported in more than one-tenth of the total number of schools. Schools in Group IV had proportionately more local production equipment and materials than schools in other groups.

The average number of selected materials produced by eighty-five selected² Saskatchewan high schools during the previous school year is reported in Table XXX. For most of the materials listed, the proportion of schools which produced them as well as the number of pieces produced per school were higher for schools in Group IV. However, the per pupil ratios of materials produced did not necessarily follow this trend. Several items had a higher per pupil ratio in Group I schools than other groups. The materials produced in greatest numbers during the previous

²See page 44.

TABLE XXIX

LOCAL PRODUCTION ITEMS, BY ENROLLMENT GROUPS

Local Production Items	Enrollment Groups								Total	
	I (1-100)		II (101-200)		III (201-500)		IV (Over 500)			
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Mechanical lettering equipment	18	10.2	7	10.0	8	22.2	6	31.6	39	12.9
Transfer lettering (pressure sensitive)	7	4.0	2	2.9	2	5.6	4	21.1	15	5.0
35 mm camera	7	3.9	12	17.1	13	36.1	11	57.9	43	14.1
2 1/4 x 2 1/4 camera	10	5.6	0	0.0	4	11.1	5	26.3	19	6.2
8 mm movie camera	3	1.7	4	5.7	1	2.8	6	33.3	14	4.6
Copy stand	3	1.7	2	2.9	3	8.3	5	26.3	13	4.3
Television camera	2	1.1	1	1.4	0	0.0	2	10.5	5	1.6
Video tape recorder (TV)	2	1.1	1	1.4	1	2.8	2	10.5	6	2.0
Dry mount press and materials	3	1.7	0	0.0	1	2.8	6	31.6	10	3.3
Diazo printer and materials	4	2.2	0	0.0	1	2.8	5	26.3	10	3.3
Spirit duplicator (Ditto)	172	96.1	65	92.9	35	97.2	18	94.7	290	95.4
Mimeograph (Gestetner)	101	56.4	62	88.6	35	97.2	18	94.7	216	71.1
Off set printing press	1	0.6	1	1.4	2	5.6	7	36.8	11	3.6
Electronic stencil cutter	5	2.8	2	2.9	3	8.3	5	26.3	15	4.9
Thermal process copier (Thermofax)	99	55.3	44	62.9	29	80.6	17	89.5	189	62.2

TABLE XXX

NUMBER OF MATERIALS PRODUCED DURING THE PREVIOUS SCHOOL YEAR
IN 85 SELECTED SCHOOLS, BY ENROLLMENT GROUPS

	Enrollment Groups											
	I (1-100)			II (101-200)			III (201-500)			IV (Over 500)		
	N/P*	N/S	%	N/P	N/S	%	N/P	N/S	%	N/P	N/S	%
Photographs (Prints)	0.4	25.4	21.4	0.1	16.7	11.1	0.2	66.0	20.0	0.2	108.9	42.9
2" x 2" Slides	0.3	17.9	7.1	0.0	5.6	11.1	0.0	5.0	4.0	0.1	50.7	33.3
Mounted Pictures	0.1	3.8	7.1	0.0	0.0	0.0	0.0	2.9	7.7	0.0	24.3	21.4
Filmstrips	0.1	3.8	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	6.3
8 mm Motion Pictures	0.0	1.5	14.3	0.0	0.0	0.0	0.0	0.0	4.0	0.0	1.5	23.5
TV video tapes	0.0	0.4	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	6.3
Audio tapes	0.0	2.9	35.7	0.0	2.5	22.7	0.0	6.2	20.8	0.0	16.9	40.0
Overhead transparencies	0.3	20.0	35.7	0.5	78.4	82.4	0.4	140.0	83.3	0.3	239.9	83.3

*N/P = average number of items per pupil produced by those schools producing the designated material,

N/S = average number of items per school produced by those schools producing the designated material,

% = percentage of schools which produced the designated material.

school year were overhead transparencies. Group I schools produced 20.0 transparencies per school, Group II produced 78.4 per school, Group III produced 140.0 per school and Group IV produced 239.9 per school. Production of overhead transparencies occurred in a greater percentage of schools than did production of other materials. Overhead transparencies were produced by 35.7 per cent of Group I schools, 84.2 per cent of Group II schools, 83.3 per cent of Group III schools and 83.8 per cent of Group IV schools. Audio tapes and photographic prints were also produced in relatively large numbers by a number of Saskatchewan high schools.

The organizational controls for local production supplies in the schools are reported in Table XXXI. One hundred nine or 39.9 per cent of all schools reported that their supplies were drawn from a central source without limitation. One hundred fourteen or 41.8 per cent of the schools indicated that local production supplies were not available in the school. These schools tended to be in Groups I and II. Eighty or 50.3 per cent of the schools in Group I and 24 or 38.1 per cent of the schools in Group II indicated that local production supplies were not available. Of the schools which responded "Other", eight specified that supplies were made available when required, three specified no limits, three indicated very little use of materials, and seven specified controls involving variations of the other choices.

VII. IN-SERVICE AV TRAINING

The number of schools which gave AV in-service media training to their teachers is indicated in Table XXXII(1). One hundred four

TABLE XXXI

ADMINISTRATION OF PRODUCTION SUPPLIES, BY ENROLLMENT GROUPS

	Enrollment Groups				Total	
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)		
	Number	Per cent	Number	Per cent	Number	Per cent
Administration of Production Supplies						
Limited by subject area quota	9	5.7	3	4.8	0	0.0
Limited by a per teacher quota	8	5.0	2	3.2	1	3.2
Drawn from central supply without formal regulations of amounts	49	30.8	30	47.6	20	62.5
Not used in this school	80	50.3	24	38.1	9	28.1
Other	13	8.2	4	6.3	2	6.2
TOTAL	159	100.0	63	100.0	32	100.0
					19	100.0
					273	100.0

TABLE XXXII

NUMBER OF SCHOOLS WHICH (1) GAVE AV MEDIA TRAINING TO TEACHERS, AND (2) PROVIDED AV DEMONSTRATIONS FOR TEACHERS, BY ENROLLMENT GROUPS

Number of Schools	Enrollment Groups				Total	
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)		
	Number	Number	Number	Number	Number	Per cent
(1) Gave AV Media Training To Teachers	53	31	10	10	104	34.2
(2) Provided AV Demonstrations For Teachers	56	31	15	12	114	38.1

or 34.2 per cent of all the schools reported offering this service. A larger percentage of Group IV schools, 52.6 per cent, provided media training to teachers. AV demonstrations for teachers were provided in 114 or 38.1 per cent of all schools as shown in Table XXXII(2). This service was provided in a larger percentage of schools in Group IV, 63.2 per cent, than other groups.

As seen in Table XXXIII, AV in-service demonstrations were most commonly presented by salesmen, 38.8 per cent; principals, 35.8 per cent; and AV coordinators, 30.9 per cent. In Group I, 41 or 43.6 per cent of the schools reported principals giving AV demonstrations, while in Group IV 1 or 6.2 per cent of the schools reported principals giving AV demonstrations. AV coordinators gave AV demonstrations in 25 or 26.6 per cent of the Group I schools and 10 or 62.5 per cent of the Group IV schools. The "Other" responses included 3 demonstrations by IMC personnel, 3 by school unit supervisory assistants and 2 by vice principals.

The amount of AV media involvement at teachers' conventions in the past two years is revealed in Table XXXIV. Displays of AV equipment and materials were most common with 174 or 57.8 per cent of the schools reporting equipment displays and 137 or 45.7 per cent of the schools reporting audio-visual materials displays. Three of the "Other" respondents specified print material displays.

VIII. MATERIALS

The number of instructional materials located in the eighty-five selected schools³ is reported in Table XXXV. For most of the

³See page 44.

TABLE XXXIII

POSITION OF INDIVIDUALS PRESENTING AV IN-SERVICE DEMONSTRATIONS, BY ENROLLMENT GROUPS

Position of Individuals Presenting AV In-Service Demonstrations	Enrollment Groups								Total	
	I (1-100)		II (101-200)		III (201-500)		IV (Over 500)			
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent		
Classroom teachers	27	28.4	15	33.3	8	33.3	3	18.8	53	29.4
Principal	41	43.6	18	40.0	4	16.7	1	6.2	64	35.8
AV coordinator	25	26.6	11	25.0	9	37.5	10	62.5	55	30.9
Librarian	5	5.4	10	22.2	3	12.5	3	18.8	21	11.8
Salesmen	28	30.1	22	48.9	13	54.2	6	37.5	69	38.8
Department of Education personnel	5	5.3	1	2.2	1	4.2	0	0.0	7	3.9
University personnel	3	3.2	0	0.0	1	4.2	1	6.2	5	2.8
Others	3	3.2	0	0.0	1	4.2	4	25.0	8	4.5

TABLE XXXIV

AMOUNT OF AV MEDIA INVOLVEMENT IN TEACHERS' CONVENTIONS, BY ENROLLMENT GROUPS

Types of AV Media Involvement at Teachers' Conventions	Enrollment Groups				Total	
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)		
	Number	Number	Number	Number	Number	Per cent
Displays of AV equipment	101	41	19	13	174	57.8
Displays of AV materials	73	37	16	11	137	45.7
AV demonstration lesson	46	21	11	3	81	27.0
Guest speaker in the area of AV media	56	18	13	3	90	30.0
No sign or mention of media	49	18	10	2	79	26.3
Other	3	1	1	1	6	2.0

TABLE XXXV
NUMBER OF INSTRUCTIONAL MATERIALS IN 85 SELECTED SCHOOLS, BY ENROLLMENT GROUPS

	Enrollment Groups											
	I (1-100)			II (101-200)			III (201-500)			IV (Over 500)		
	N/P*	N/S	%	N/P	N/S	%	N/P	N/S	%	N/P	N/S	%
16 mm films	0.0	0.4	6.3	0.0	0.1	10.0	0.0	1.1	20.0	0.0	6.5	38.9
8 mm reel films	0.0	0.1	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	11.8
8 mm loop films	0.0	1.3	6.3	0.0	0.0	0.0	0.0	2.7	15.4	0.0	6.2	38.9
Filmstrips	0.7	40.1	93.3	0.6	83.4	100.0	0.3	93.9	81.5	0.2	152.6	94.1
Disc recordings	0.5	33.2	69.2	0.5	67.9	57.9	0.1	23.8	65.4	0.1	53.3	77.8
Audio tape recordings	0.2	13.3	81.3	0.2	22.4	84.2	0.1	18.4	70.4	0.1	82.9	82.4
Video tape recordings	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	4.0	0.2	14.3	14.3
2" x 2" slides	0.7	42.9	25.0	0.5	73.1	26.3	0.3	96.9	47.8	0.2	170.6	58.8
Overhead transparencies (teacher made)	0.2	13.5	46.7	0.6	81.2	88.9	0.4	115.5	91.7	0.3	244.6	92.9
Overhead transparencies (commercial)	0.0	2.5	13.3	0.1	15.1	58.8	0.3	82.2	60.9	0.1	73.4	88.2
Library books	16.8	1060.0	100.0	17.3	2535.8	100.0	13.4	4345.6	100.0	11.4	8097.1	100.0

*N/P = Average number of items per pupil in those schools having the designated material,
N/S = average number of items per school in those schools having the designated material,
% = percentage of schools having the designated material.

materials, the number of items per school and the percentage of schools which had materials were higher in Group IV than other groups. The numbers of items per pupil for several materials was higher in Group I than other groups. Library books were the most common type of instructional material found in Saskatchewan high schools. Average numbers of books per schools ranged from 1060.0 in Group I schools to 8097.1 in Group IV schools. However, the number of books per pupil ranged from 11.4 in Group IV schools to a high of 17.3 in Group II and 16.8 in Group I schools. Disc recordings, audio tape recordings, filmstrips and teacher made transparencies were indicated as the audio-visual materials most commonly found in the schools. Ownership of filmstrips was spread rather evenly across all groups of schools. Filmstrips were located in 93.3 per cent of Group I schools, 100.0 per cent of Group II schools, 81.5 per cent of Group III schools and 94.1 per cent of Group IV schools. The number of overhead transparencies per school were 16.1 in Group I, 96.3 in Group II, 197.7 in Group III and 318.0 in Group IV.

IX. EQUIPMENT

Table XXXVI reports the average number of pieces of equipment for the eighty five selected schools⁴ on a per class and per school basis, as well as the percentage of schools having each item. For most types of equipment, a higher percentage of schools in Group IV than in other groups had equipment. The numbers of pieces of equipment per school

⁴See page 44.

TABLE XXXVI

NUMBER OF PIECES OF EQUIPMENT IN 85 SELECTED SCHOOLS, BY ENROLLMENT GROUPS

	Enrollment Groups											
	I (1-100)			II (101-200)			III (201-500)			IV (Over 500)		
	N/C*	N/S	%	N/C	N/S	%	N/C	N/S	%	N/C	N/S	%
16 mm projectors	0.3	0.8	76.5	0.2	1.0	95.2	0.1	1.7	100.0	0.1	3.5	100.0
8 mm reel projectors	0.0	0.1	7.7	0.0	0.0	0.0	0.0	0.1	7.7	0.0	0.8	26.3
8 mm loop projectors	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7	0.3	0.1	1.7	0.6
Language laboratories	0.0	0.1	14.3	0.0	0.1	5.0	0.0	0.2	19.2	0.0	0.4	31.6
Reel tape recorders	0.4	1.3	81.3	0.3	1.6	95.2	0.2	2.2	80.8	0.3	6.4	100.0
Cassette tape recorders	0.3	1.0	25.0	0.0	0.1	9.1	0.0	0.3	19.2	0.1	1.6	47.4
Slide-filmstrip projectors	0.3	0.9	75.0	0.1	0.8	72.7	0.2	2.2	88.9	0.3	6.0	94.7
Filmstrip projectors	0.1	0.4	25.0	0.1	0.9	54.5	0.1	1.3	48.0	0.1	3.1	50.0
Slide projectors	0.0	0.1	12.5	0.1	0.4	31.8	0.1	0.7	34.6	0.0	1.1	44.4
Viewers	0.2	0.5	37.5	0.1	0.6	31.8	0.1	1.3	22.2	0.2	3.7	73.7

N/C = average number of items per class in those schools having the designated equipment,

N/S = average number of items per school in those schools having the designated equipment,

% = percentage of schools having the designated equipment.

TABLE XXXVI (continued)

	Enrollment Groups											
	I (1-100)			II (101-200)			III (201-500)			IV (Over 500)		
	N/C*	N/S	%	N/C	N/S	%	N/C	N/S	%	N/C	N/S	%
Opaque projectors	0.0	0.1	12.5	0.0	0.1	9.1	0.0	0.6	50.0	0.0	1.1	84.2
Micro projectors	0.0	0.0	0.0	0.1	0.5	27.3	0.0	0.4	20.0	0.0	0.1	10.5
Overhead projectors	0.4	1.1	68.8	0.3	1.6	86.4	0.3	4.0	100.0	0.5	12.4	94.7
Radios	0.9	2.6	81.3	0.2	1.3	72.7	0.1	1.0	66.7	0.0	1.0	61.1
Record players	0.8	2.4	87.5	0.2	1.5	86.4	0.2	2.9	100.0	0.2	5.3	100.0
Television receivers	0.4	1.1	81.3	0.2	1.0	81.8	0.1	1.2	81.5	0.1	3.6	89.5
Portable screens	0.3	0.8	68.8	0.2	1.4	81.8	0.2	2.3	88.9	0.2	4.3	94.7
Mounted wall screens	0.1	0.4	31.3	0.3	1.5	45.5	0.4	5.5	69.2	0.5	12.5	83.3
Portable rear screens	0.0	0.0	0.0	0.0	0.2	14.3	0.0	0.0	4.0	0.0	0.7	10.5
Microfilm readers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	5.3

*N/C = average number of items per class in those schools having the designated equipment,
N/S = average number of items per school in those schools having the designated equipment,
% = percentage of schools having the designated equipment.

were also greater for Group IV. The numbers of pieces of equipment per class were not larger in Group IV.

The 16 mm projector was the item of equipment available in the highest percentage of schools. They were located in 76.5 per cent of Group I schools, 95.2 per cent of Group II schools, and 100.0 per cent of Group III and IV schools. However, the number of units per school was not as high as that for several other types of equipment. Overhead projectors were available in 68.8 per cent of Group I schools, 86.4 per cent of Group II schools, 100.0 per cent of Group III schools and 94.7 per cent of Group IV schools. The numbers of overhead projection units per school were greater than the numbers of most other types of audio-visual equipment. There were 1.1 overhead projectors per school in Group I, 1.6 per school in Group II, 4.0 per school in Group III and 12.4 per school in Group IV. Reel tape recorders were available in 81.3 per cent of Group I schools, 95.2 per cent of Group II schools, 80.8 per cent of Group III schools and 100.0 per cent of Group IV schools. The number of reel tape recorders per school was 1.3 in Group I, 1.6 in Group II, 2.2 in Group III and 6.4 in Group IV.

Radios were available in 81.3 per cent of Group I schools compared with 61.1 per cent of Group IV schools. Group I had 2.6 radios per school, compared with 1.0 radios per school in Group IV.

Micro projectors, microfilm readers and portable rear screens were generally not available in the schools.

X. MAJOR BARRIERS TO AN IMPROVED AUDIO-VISUAL PROGRAM

A lack of money was reported as a major barrier to an improved

audio-visual program by 199 or 65.9 per cent of the Saskatchewan high schools. Other major barriers reported by a majority of the schools, as seen in Table XXXVII, were a lack of time for teacher preparation of materials in 186 or 61.6 per cent of the schools and inadequate physical facilities for media use in 171 or 56.6 per cent of the schools. A lack of professional AV counsel for teachers was reported as a barrier by 140 or 46.5 per cent of the schools. An insufficient quantity of materials was termed a major problem by 123 or 40.7 per cent of the schools. One-third of all the schools felt that school boards were not convinced about the value of media. Eighteen or 6.0 per cent of the schools felt that administrators were not convinced about media value. The lowest number of responses for any suggested barrier were the 6 or 2.0 per cent of the schools which indicated difficulty in operation of equipment.

The need for professional AV counsel for teachers was expressed by 76 or 42.9 per cent of Group I schools, 31 or 44.9 per cent of Group II schools, 21 or 58.3 per cent of Group III schools, and 12 or 63.2 per cent of Group IV schools.

When the data for major barriers were tabulated by organization of media services and position of respondents, no consistent patterns or directions were revealed.

XI. EVALUATION OF THE AUDIO-VISUAL PROGRAM

The evaluation of audio-visual programs in Saskatchewan high schools is reported in Table XXXVIII. No evaluation was reported by 87 or 29.0 per cent of the schools; casual evaluation by 175 or 58.3

TABLE XXXVII

MAJOR BARRIERS TO EFFECTIVE MEDIA USE IN SCHOOLS, BY ENROLLMENT GROUPS

Major Barriers to Effective Media Use	Enrollment Groups								Total	
	I (1-100)		II (101-200)		III (201-500)		IV (Over 500)			
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Teacher indifference	34	19.2	23	33.3	8	22.2	6	31.6	71	23.6
Lack of time for the teacher preparation of materials	112	62.9	39	56.5	21	58.3	14	73.7	186	61.6
Need for professional AV counsel for teachers	76	42.9	31	44.9	21	58.3	12	63.2	140	46.5
AV media too costly for results	39	22.2	19	27.5	7	19.4	3	15.8	68	22.7
Lack of money	120	67.4	49	71.0	18	50.0	12	63.2	199	65.9
Insufficient quantities of materials	69	39.0	34	48.6	14	38.9	6	31.6	123	40.7
Materials available don't fit curricula	24	13.6	10	14.5	2	5.6	4	21.1	40	13.3
Difficulty in scheduling materials and equipment	26	14.8	13	18.8	8	22.2	4	21.1	51	17.0
School board not convinced about the value of media	58	32.8	28	40.6	10	27.8	4	21.1	100	33.2
Administrators not convinced about the value of media	11	6.2	3	4.3	3	8.3	1	5.3	18	6.0
Equipment too difficult to operate	1	0.6	4	5.8	1	2.9	0	0.0	6	2.0
Inadequate repair service available for equipment	27	15.3	7	10.1	5	13.9	2	10.5	41	13.7
Inadequate physical facilities for media use	101	56.7	38	55.1	23	63.9	9	47.4	171	56.6

TABLE XXXVIII

EVALUATION OF AV PROGRAMS, BY ENROLLMENT GROUPS

Evaluation of AV program	Enrollment Groups				Total	
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)		
	Number	Per cent	Number	Per cent	Number	Per cent
Planned and regular	17	9.6	5	7.4	8	22.2
Casual	107	60.1	40	58.8	20	55.6
Not being undertaken	54	30.3	23	33.8	8	22.2
TOTAL	178	100.0	68	100.0	36	100.0
					18	100.0
					37	12.3
					175	58.3
					88	29.4
					300	100.0

per cent of the schools and planned, regular evaluation by 37 or 12.3 per cent of the schools. Of those schools which carried out evaluation of their programs, the percentage of schools with planned and regular evaluation was greater in Groups III and IV. Conversely, for casual evaluation the percentage of schools decreased in Groups III and IV. Planned and regular evaluation was reported in 17 or 19.6 per cent of the Group I schools, 5 or 7.4 per cent of the Group II schools, 8 or 22.2 per cent of the Group III schools and 7 or 38.9 per cent of the Group IV schools. Casual evaluation was reported in 107 or 60.1 per cent of the Group I schools, 40 or 58.8 per cent of the Group II schools, 20 or 55.6 per cent of the Group III schools and, 8 or 44.4 per cent of the Group IV schools.

As shown in Table XXXIX the Educational Media Association of Canada Guidelines had not been studied by 211 or 72.0 per cent of the respondents. Another 44 or 15.0 per cent did not have an opinion of them. The Guidelines had not been studied by 128 or 74.9 per cent of the schools in Group I, 53 or 77.9 per cent of the schools in Group II, 23 or 63.9 per cent of the schools in Group III and 7 or 38.9 per cent of the schools in Group IV. The EMAC Guidelines were considered a reasonable goal by 29 or 9.9 per cent of the respondents. The Guidelines were considered reasonable by 11 or 6.4 per cent of the Group I schools, 3 or 4.4 per cent of Group II schools, 8 or 22.2 per cent of Group III schools, and 7 or 38.9 per cent of the Group IV schools. Nine or 3.1 per cent of all schools considered EMAC Guidelines an unreasonable goal for their schools.

TABLE XXXIX

OPINION OF THE EMAC GUIDELINES, BY ENROLLMENT GROUPS

Opinion of EMAC Guidelines	Enrollment Groups								Total	
	I (1-100)		II (101-200)		III (201-500)		IV (Over 500)			
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
A reasonable goal for your school	11	6.4	3	4.4	8	22.2	7	38.9	29	9.9
An unreasonable goal for your school	5	2.9	3	4.4	0	0.0	1	5.6	9	3.1
No opinion	27	15.8	9	13.3	5	13.9	3	16.6	44	15.0
Have not studied them	128	74.9	53	77.9	23	63.9	7	38.9	211	72.0
TOTAL	171	100.0	68	100.0	36	100.0	18	100.0	293	100.0

XII. FUTURE PLANS

Audio-visual Media

Future plans of Saskatchewan high schools for utilizing eight selected types of audio-visual media are revealed in Table XL. Plans for increased use of 16 mm film were indicated by 117 or 40.8 per cent of the schools with the highest proportion, 13 or 76.5 per cent in Group IV. One hundred fifty-four or 53.7 per cent of all schools reported an intention to continue present use.

There was no plan to try 8 mm loops in 103 or 54.2 per cent of the schools in the province, while 54 or 28.4 per cent of the schools reported plans to try them. Seventy-one or 68.9 per cent of Group I schools reported no plans to try 8 mm loops, while 12 or 70.6 per cent of the Group IV schools reported an intention to use more 8 mm loops.

The overhead projector was reported as a medium to be used more by 174 or 63.0 per cent of the schools. Another 34 or 12.3 per cent of the schools indicated plans to try the overhead. For the reel tape recorder, 148 or 51.7 per cent of the schools indicated plans for increased use, and 117 or 40.9 per cent reported intentions to continue the present level of use. Increased level of use plans were reported for the reel tape recorder in 15 or 83.3 per cent of Group IV schools. Plans to try the cassette tape recorder were indicated by 7 or 30.4 per cent of Group III schools and 13 or 72.7 per cent of Group IV schools. No plan to try cassette tape recorders was indicated by 63 or 64.9 per cent of the Group I schools and 23 or 63.9 per cent of the Group II schools.

TABLE XL

FUTURE PLANS FOR USE OF SELECTED MEDIA, BY ENROLLMENT GROUPS

Future plans for use of Selected Media	Enrollment Groups				Total
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)	
	Number Per cent	Number Per cent	Number Per cent	Number Per cent	Number Per cent
16 mm films	90 52.6	42 64.6	18 52.9	4 23.5	154 53.6
	68 39.8	20 30.8	16 47.1	13 76.5	117 40.8
	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0
	5 2.0	3 4.6	0 0.0	0 0.0	8 2.8
	8 4.6	0 0.0	0 0.0	0 0.0	8 2.8
TOTAL	171 100.0	65 100.0	34 100.0	17 100.0	287 100.0
8 mm loops	3 2.9	1 2.2	2 8.0	0 0.0	6 3.2
	4 3.9	5 11.1	5 20.0	12 70.6	26 13.7
	1 1.0	0 0.0	0 0.0	0 0.0	1 0.5
	24 23.3	17 37.8	9 36.0	4 23.5	54 28.4
	71 68.9	22 48.9	9 36.0	1 5.9	103 54.2
TOTAL	103 100.0	45 100.0	25 100.0	17 100.0	190 100.0
Overhead	28 17.8	11 16.7	7 20.6	4 21.1	50 18.2
	89 56.7	43 65.2	27 79.4	15 78.9	174 63.0
	3 1.9	2 3.0	0 0.0	0 0.0	5 1.8
	26 16.6	8 12.1	0 0.0	0 0.0	34 12.3
	11 7.0	2 3.0	0 0.0	0 0.0	13 4.7
TOTAL	157 100.0	66 100.0	34 100.0	19 100.0	276 100.0

TABLE XL (continued)

Future plans for use of Selected Media	Enrollment Groups				Total
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)	
	Number Per cent	Number Per cent	Number Per cent	Number Per cent	
Reel tape recorder	70 41.1	33 50.8	11 33.3	3 16.7	117 40.9
	84 49.4	29 44.6	20 60.6	15 83.3	148 51.7
	1 0.6	0 0.0	0 0.0	0 0.0	1 0.4
	11 6.5	1 1.5	0 0.0	0 0.0	12 4.2
	4 2.4	2 3.1	2 6.1	0 0.0	8 2.8
TOTAL	170 100.0	65 100.0	33 100.0	18 100.0	286 100.0
Cassette tape recorder	10 10.3	5 13.9	0 0.0	1 5.6	16 9.2
	11 11.4	2 5.6	7 30.4	13 72.2	33 19.0
	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0
	13 13.4	6 16.6	6 26.1	2 11.1	27 15.5
	63 64.9	23 63.9	10 43.5	2 11.1	98 56.3
TOTAL	97 100.0	36 100.0	23 100.0	18 100.0	174 100.0
2" x 2" slides	25 21.0	11 22.4	3 12.5	4 23.5	43 20.6
	17 14.3	11 22.4	11 45.8	11 64.7	50 23.9
	0 0.0	0 0.0	0 0.0	1 5.9	1 0.5
	24 20.2	8 16.3	2 8.4	1 5.9	35 16.7
	53 44.5	19 38.8	8 33.3	0 0.0	80 38.3
TOTAL	119 100.0	49 100.0	24 100.0	17 100.0	209 100.0

TABLE XL (continued)

Future plans for use of Selected Media	Enrollment Groups				Total
	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)	
	Number Per cent	Number Per cent	Number Per cent	Number Per cent	Number Per cent
Continue present use	96 60.1	36 54.5	9 29.0	5 29.4	146 53.2
Broadcast television	45 28.1	15 22.7	8 25.8	7 41.2	75 27.4
Less use	0 0.0	0 0.0	1 3.2	0 0.0	1 0.4
Plan to try	5 3.1	4 6.1	2 6.5	1 5.9	12 4.4
No plan to try	14 8.7	11 16.7	11 35.5	4 23.5	40 14.6
TOTAL	160 100.0	66 100.0	31 100.0	17 100.0	274 100.0
Continue present use	5 4.9	2 4.5	0 0.0	0 0.0	7 3.7
More use	6 5.8	2 4.5	2 7.7	5 33.3	15 8.0
Less use	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0
Plan to try	4 3.9	2 4.5	5 19.2	5 33.3	16 8.5
No plan to try	88 85.4	38 86.5	19 73.1	5 33.4	150 79.8
TOTAL	103 100.0	44 100.0	26 100.0	15 100.0	188 100.0

Somewhat the same pattern emerged for 2" x 2" slides. Eleven or 45.8 per cent of the schools in Group III and 11 or 64.7 per cent of Group IV schools indicated plans for more use. Fifty-three or 44.5 per cent of the schools in Group I and 19 or 38.8 per cent of the schools in Group II had no plan to try 2" x 2" slides.

One hundred forty-six of the schools or 53.3 per cent reported that they planned to continue present use of broadcast television, while 75 or 27.4 per cent indicated intentions to use more broadcast television. Plans to try video tape television were reported by 16 or 8.5 per cent of the schools, while 150 or 79.8 per cent of the schools responded that they had no plans to try video tape television.

Personnel

Table XLI reveals that only a small number of schools had or reported intentions to hire a media specialist or media technician. Media specialists presently on staff were reported by six schools while only 8 or 2.7 per cent planned to hire such a person within two years. Six schools reported media technicians presently on staff; 12 or 4.1 per cent of the schools planned to hire such a person within two years. A majority of the schools indicated no plans to hire a media specialist or media technician. One hundred ninety-six or 66.9 per cent of the schools responded that they had no budget for a media specialist, while 75 or 25.6 per cent felt that they had no need for a media specialist. A lack of budget was reported as the reason why 169 or 58.3 per cent of the schools had no plans to hire a media technician and another 97 or 33.4 per cent reported no need for this type of person.

TABLE XLI

AV PERSONNEL PLANS, BY ENROLLMENT GROUPS

Enrollment Groups						Total
AV Personnel	I (1-100)	II (101-200)	III (201-500)	IV (Over 500)		
	Number Per cent	Number Per cent	Number Per cent	Number Per cent		
Media specialist	1 0.6	1 1.4	3 9.4	1 5.9	6 2.0	
	1 0.6	1 1.4	1 3.1	5 29.4	8 2.7	
	2 1.1	2 2.9	3 9.4	1 5.9	8 2.7	
	126 72.0	46 66.7	16 50.0	8 47.1	196 66.9	
	45 25.7	19 27.6	9 28.1	2 11.1	75 25.7	
TOTAL	175 100.0	69 100.0	32 100.0	17 100.0	293 100.0	
Media technician	1 0.6	1 1.5	2 6.2	2 11.8	6 2.1	
	4 2.4	1 1.5	2 6.2	5 29.4	12 4.1	
	3 1.7	0 0.0	1 3.1	2 11.8	6 2.1	
	108 62.4	39 57.3	15 46.9	7 41.1	169 58.3	
	57 32.9	27 39.7	12 37.6	1 5.9	97 33.4	
TOTAL	173 100.0	68 100.0	32 100.0	17 100.0	290 100.0	

XIII. SUMMARY

The status of audio-visual programs in Saskatchewan high schools has been described in this chapter. The data which were collected by questionnaire from 306 of the 339 high schools have been tabulated and summarized in this chapter. The data were basically categorized according to four size-of-enrollment groups and, where appropriate, by the organization of media services available. A majority of the questionnaires were completed by school principals.

A compilation of organizational data revealed the following information. Sixty-nine per cent of the 306 Saskatchewan high schools were not served by either a district or building IMC. Group I schools tended to coordinate their AV program through the principal's office while Group IV schools coordinated the program through an AV coordinator or librarian. Only 13.1 per cent of the schools had an AV committee. One hundred seventeen or 38.6 per cent of the schools located AV materials in the library. More than one-half of the schools did not have materials catalogued. Nine per cent of the schools allowed student access to AV materials on the same basis as books.

Adequate facilities for media use were limited. A library was reported in 88 per cent of the schools. All other facilities were reported in less than 30 per cent of the schools. Schools in Group IV had more facilities than schools in other groups.

Audio-visual budgets were reported in 150 or 49.7 per cent of the responding schools. Of this number, sixty-two schools had an independent AV budget, while fifty-three reported budgets connected with the

library. Budgets were prepared and expended by people in a variety of positions.

The 1968 instructional media budgets were reported for the respondents from the eighty-five school sample. The greatest per pupil expenditures were as follows: Group III schools spent \$3.05 per pupil for AV equipment, Group IV schools spent \$2.76 per pupil for AV materials, Group IV schools spent \$1.25 per pupil for AV expendable supplies and Group I schools spent \$10.29 per pupil for library books.

Audio-visual coordinators were reported in 169 or 57.7 per cent of the schools. A majority of them had the following: little or no formal training in audio-visual media, more than five years teaching experience, from one to five hours per week of AV duties, and no released time for performing AV duties. AV coordinators in Group IV schools assumed more responsibilities than those in other groups.

Student assistants were used in 73 or 24.6 per cent of the schools, usually in a class in which they were enrolled, with equipment operation as their major responsibility.

Apart from office-type machines, local production equipment was not common in Saskatchewan high schools. Group III and IV schools produced a larger number and variety of materials per school. Overhead transparencies were the most commonly produced item.

One hundred four or 34.2 per cent of the schools provided media training to staff members. AV in-service demonstrations were usually carried out by salesmen and principals. One hundred seventy-four or 57.8 per cent of the schools reported equipment displays, and

137 or 45.7 per cent of the schools reported audio-visual materials displays within the past two years at teachers' conventions.

The most commonly available instructional materials in schools were library books. Disc and tape recordings, filmstrips and overhead transparencies were the most common AV materials. Equipment for media use was most often available in Group IV schools with the most frequently reported items being overhead projectors, 16 mm projectors and reel type tape recorders.

The following major barriers to the effective use of AV media were most frequently reported by the schools: a lack of financial support by 65.9 per cent of the schools, a lack of time for teacher preparation of materials by 61.6 per cent of the schools and inadequate physical facilities by 56.6 per cent of the schools.

Eighty-seven or 29.0 per cent of the schools reported that their AV programs had not been evaluated. Another 175 or 58.3 per cent of the schools reported that their AV programs had been casually evaluated. The majority of respondents were not familiar with the EMAC Guidelines.

Future plans for AV media use indicated that most schools plan increased use of 16 mm films, overhead transparencies and reel tape recordings. Group IV schools indicated plans to use more 8 mm loops, cassette tape recordings and 2" x 2" slides. There is no indication of a general trend to the use of more television. A majority of the schools indicated no plans to hire either a media specialist or technician.

CHAPTER V

A COMPARISON OF THE FINDINGS WITH THE EMAC GUIDELINES

The EMAC Guidelines published in 1968 represent an attempt to establish audio-visual media standards for Canadian schools. This chapter will compare the findings of this study with the EMAC Guidelines. While the EMAC Guidelines were used as a reference in the planning stages of this study, it was not possible to collect data suitable for direct comparison with them. For this reason the comparison does not consider all aspects of either the study or the Guidelines. The data collected which can be compared with the EMAC Guidelines are arranged in the following sections: facilities, budget, personnel, local production, materials and equipment.

I. FACILITIES

The EMAC Guidelines state that an equipped darkroom is a basic facility for all high schools.¹ The data collected revealed that 14.4 per cent of the Saskatchewan high schools involved in this study had photographic darkrooms. This proportion ranged from 5.0 per cent in Group I schools to 57.9 per cent in Group IV schools.²

¹The Canadian Audio Visual Review, op. cit., p. 23.

²Enrollment Categories: Group I = 1-100, Group II = 101-200, Group III = 201-500, Group IV = Over 500.

The EMAC Guidelines prescribe provisions for closed circuit television as follows:

All new construction should include provision for cable termination at each learning station, and older buildings should be wired for closed circuit television as needs develop. All leads should terminate in one distribution room.³

Only twenty-one or 6.9 per cent of the Saskatchewan high schools reported having conduit for closed circuit television. One-third of these schools were from the nineteen schools of Group IV.

EMAC Guidelines state that all classrooms should have light control adequate for all types of projected media.⁴ This study surveyed the percentages of classrooms in Saskatchewan high schools with light control adequate for 16 mm. Twenty-five per cent of the schools reported no classroom with this type of light control; another 38 per cent reported that not more than one in four of their classrooms were so equipped. Twenty-one per cent reported that more than three-quarters of their classrooms had this degree of light control.

Each classroom should have a permanent screen, with a minimum size of 60" x 60", according to the EMAC Guidelines.⁵ Thirty-five per cent of Saskatchewan high schools had no classrooms equipped with such screens. Another 42 per cent reported less than one quarter of their classrooms so equipped. Only 8 per cent stated that more than

³The Canadian Audio Visual Review, loc. cit.

⁴Ibid.

⁵Ibid.

three-quarters of their classrooms had these screens. In the area of light control and screens, Group IV schools were better equipped than schools in other groups.

The proportion of Saskatchewan high schools which met the desired specifications of the EMAC Guidelines for these four selected facilities was small. Although darkrooms and closed circuit television might be considered as ancillary by schools with limited resources, light control and screens are fundamental to any secondary school.

II. BUDGET FOR NON-PRINT MATERIALS

The recommended budget for audio-visual non-print materials is stated in the EMAC Guidelines.⁶ Initial basic expenditures for non-print materials should be \$9,500 for schools under 150 students, plus an additional \$30 per student over 150 students. Subsequent annual expenditure should be five to eight dollars per student. In 1968 AV materials expenditures were reported by fifty of the eighty-five selected⁷ schools. Twenty-five or 50.0 per cent of the schools spent less than \$1.00 per pupil for AV materials. Eleven or 22.0 per cent of the schools spent between one and two dollars per pupil for AV materials. Nine or 18.0 per cent of the schools spent between two and four dollars per pupil. Five or 10.0 per cent of the schools spent more than four dollars per pupil for AV materials.

⁶Ibid., p. 28.

⁷See page 44.

The fifty schools had a combined total enrollment of 17,895 pupils. In 1968 they spent a total of \$50,214.00 or \$2.25 per pupil for AV materials. The EMAC Guidelines recommend a minimum annual expenditure of \$5.00 to \$8.00 per pupil for AV materials.

III. PERSONNEL

The EMAC Guidelines define a School Media Advisor as

. . . the teacher in a school who has special training and interest in the use of educational media to improve learning and who gives leadership in their effective utilization.⁸

The Guidelines call for a part-time media advisor for schools under 300 students, and a full-time media advisor for schools over 300 students. This study defined audio-visual coordinator as the person in a school who is responsible for the audio-visual program and a media specialist (media advisor) as a teacher with special training in the selection and use of audio-visual media. The findings of the study revealed that 169 or 57.7 per cent of the high schools had AV coordinators. Six or 2.0 per cent of the schools reported that they had an AV media specialist on staff and eight or 2.7 per cent of the schools reported intentions to hire such a person within two years. Only four coordinators had two or three university AV courses; none had more than three AV courses. EMAC Guidelines specify only that the media advisor should have "special training".

⁸J. D. Miller, op. cit., p. 60.

A media technician is a non-teacher whose chief functions are to prepare instructional materials and/or to operate and maintain equipment. The EMAC Guidelines suggest that a media technician should be employed for each school with an enrollment up to 1,000 students.⁹ Six or 2.1 per cent of the Saskatchewan high schools reported having a media technician, while another 12 or 4.1 per cent of the schools indicated intentions to acquire a technician within two years.

IV. LOCAL PRODUCTION

The equipment recommended for local production in secondary schools is stated in the EMAC Guidelines. Among the items listed as basic equipment for each high school are a drymount press, diazo printer, mechanical lettering, 8 mm camera, spirit duplicator, 35 mm camera and copy stand. An electronic stencil cutter is listed among the "advanced" equipment.¹⁰ The survey of local production equipment in Saskatchewan high schools revealed that the following equipment was available: a drymount press in 3.3 per cent of the schools, a diazo printer in 3.3 per cent of the schools, mechanical lettering equipment in 12.9 per cent of the schools, an 8 mm camera in 4.6 per cent of the schools, a spirit duplicator in 95.4 per cent of the schools, a 35 mm camera in 14.1 per cent of the schools, a copy stand in 4.3 per cent of the schools and an electronic stencil cutter in 4.9 per cent of the schools.

⁹The Canadian Audio Visual Review, op. cit., p. 29.

¹⁰Ibid., p. 23.

Thus, with the exception of the spirit duplicator, the local production equipment available in Saskatchewan high schools, was not in keeping with the EMAC recommendations.

V. MATERIALS

Table XLII shows a comparison between the amount of audio-visual or non-print materials in eighty-five Saskatchewan high schools and the amount of materials which the EMAC Guidelines recommend.¹¹ Group IV schools with an average enrollment of 731 students had the greatest number of filmstrips per school, 152.6. The EMAC Guidelines recommend 2,193 filmstrips for a school of this enrollment. Group IV schools had the greatest number of slides per school, 170.6. The EMAC Guidelines recommend 1,000 slides as a basic school collection. Group II schools with an average enrollment of 146 students had the greatest number of disc recordings per school, 67.9. The EMAC Guidelines recommend 292 disc recordings for school of this enrollment. Group IV schools had the greatest number of audio tapes per school, 82.7. The EMAC Guidelines recommend 1,462 audio tapes for a school of this enrollment. Group IV schools had the greatest number of 8 mm film loops per school, 6.2. The EMAC Guidelines recommend a basic collection of two hundred 8 mm loops per school.

¹¹Ibid., p. 28.

TABLE XLII

A COMPARISON OF THE AUDIO-VISUAL MATERIALS IN 85 SASKATCHEWAN HIGH SCHOOLS WITH THE EMAC GUIDELINES

Materials	AV Materials in 85 Saskatchewan High Schools and EMAC Guidelines				Non-Print Materials EMAC Guidelines
	I (1-100) Average Enrollment-62	II (101-200) Average Enrollment-146	III (201-500) Average Enrollment-332	IV (Over 500) Average Enrollment-731	
	Number Per School	Number Per School	Number Per School	Number Per School	
Filmstrips	40.1	83.4	93.9	152.6	500 basic or 3 per student, whichever is greater
Slides	42.9	73.1	96.9	170.6	1,000 basic
Disc Recordings	33.2	67.9	23.8	53.3	200 basic or 1 per student, whichever is greater
Audio Tape Recordings	13.3	22.4	18.4	82.7	400 basic or 2 per student, whichever is greater
8 mm Loops	1.3	0.0	2.7	6.2	200 basic

VI. EQUIPMENT

The quantitative EMAC Guidelines for audio-visual equipment¹² are outlined in Table XLIII.

Table XLIV shows the number of pieces of equipment available in eighty-five Saskatchewan high schools. These figures are tabulated on a "per class" and "per school" basis.

At least three factors prevent a direct item by item comparison of the two tables. Several of the EMAC specifications use a "per department" basis. Because of low enrollments, most of the schools in the sample would not have been departmentalized. The EMAC Guidelines are not specific; the phrase "where applicable" allows schools to make judgements on the basis of local conditions. Finally, many of the EMAC Guidelines are stated on a "per learning station" basis. The data from this study were calculated on a "per class" basis. A school would probably have a higher number of learning stations than classes.

In spite of these discrepancies several general comparative observations could serve some useful purpose. The numbers of 16 mm and overhead projectors reported in the province's high schools appear to be close to the basic EMAC standards. The number of slide, 8 mm loop, opaque and micro projectors all appear to be available in considerably lesser quantities than those recommended in the EMAC Guidelines. Slide projectors, combination filmstrips and slide

¹²Ibid., pp. 18-23.

TABLE XLIII

THE EMAC GUIDELINES FOR AUDIO-VISUAL EQUIPMENT

Type of Equipment	Basic	Advanced
16 mm sound projector	1 per 10 learning stations	1 per 5 learning stations
8 mm projector	1 per school NOTE: Significant changes are occurring in the 8 mm medium which do not at present justify quantitative guidelines	
2" x 2" slide projector	1 per department where applicable	1 per learning station where applicable
Filmstrip or combination filmstrip--slide projector	1 per department where applicable	1 per learning station where applicable
Filmstrip viewer	1 per learning station where applicable	
Overhead projector	1 per 4 learning stations	1 per learning station
Opaque projector	1 per school	1 per building level having at least 6 learning stations
Micro projector	1 per school	1 per department where applicable
Record player	1 per learning station where applicable	
Tape recorder	1 per learning station where applicable	
Radio receivers (AM/FM)	1 per learning station where applicable	Central distribution system (AM/FM)

TABLE XLIV

NUMBER OF PIECES OF EQUIPMENT IN 85 SELECTED SCHOOLS, BY ENROLLMENT GROUPS

	Enrollment Groups											
	I (1-100)			II (101-200)			III (201-500)			IV (Over 500)		
	N/C*	N/S	%	N/C	N/S	%	N/C	N/S	%	N/C	N/S	%
16 mm projectors	0.3	0.8	76.5	0.2	1.0	95.2	0.1	1.7	100.0	0.1	3.5	100.0
8 mm loop projectors	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7	0.3	0.1	1.7	0.6
Slide projectors	0.0	0.1	12.5	0.1	0.4	31.8	0.1	0.7	34.6	0.0	1.1	44.4
Combination filmstrip and slide projectors	0.3	0.9	75.0	0.1	0.8	72.7	0.2	2.2	88.9	0.3	6.0	94.7
Filmstrip viewers	0.2	0.5	37.5	0.1	0.6	31.8	0.1	1.3	22.2	0.2	3.7	73.7
Overhead projectors	0.4	1.1	68.8	0.3	1.6	86.4	0.3	4.0	100.0	0.5	12.4	94.7
Opaque projectors	0.0	0.1	12.5	0.0	0.1	9.1	0.0	0.6	50.0	0.0	1.1	84.2
Micro projectors	0.0	0.0	0.0	0.1	0.5	27.3	0.0	0.4	20.0	0.0	0.1	10.5
Record players	0.8	2.4	87.5	0.2	1.5	86.4	0.2	2.9	100.0	0.2	5.3	100.0
Reel tape recorders	0.4	1.3	81.3	0.3	1.6	95.2	0.2	2.2	80.8	0.3	6.4	100.0
Radios	0.9	2.6	81.3	0.2	1.3	72.7	0.1	1.0	66.7	0.0	1.0	61.1

*N/C = number of items per class, N/S = number of items per school, % = percentage of schools owning equipment.

projectors, filmstrip viewers, reel tape recorders, record players and radios appear to be available in quantities between one-quarter and one-half of the EMAC recommendations.

VII. SUMMARY

A comparison, wherever possible, of the findings of this study with the EMAC Guidelines was made in this chapter. Most of the comparisons were quantitative. The findings of this study and the recommendations of the EMAC Guidelines were compared for four facilities--darkrooms, conduit for closed circuit television, light control in classrooms and screens in classrooms. The availability of all four facilities as reported by Saskatchewan high schools fell below the EMAC standards.

The recommended AV materials budget stated in the EMAC Guidelines was compared with the findings of this study. The EMAC Guidelines recommend expenditures from five to eight dollars per pupil annually. Of fifty Saskatchewan high schools, twenty-five spent less than one dollar per pupil for AV materials in 1968. Five or 10.0 per cent of the fifty schools spent more than four dollars per pupil. The average per pupil expenditure for AV materials in 1968 was \$2.25 for the fifty schools.

Only 2.0 per cent of Saskatchewan high schools were staffed with qualified media specialists. The EMAC Guidelines recommend a half-time media specialist for schools with less than 300 students and a full-time media specialist for schools with more than 300 students. Only 2.1 per

cent of Saskatchewan high schools had a media technician on staff. The EMAC Guidelines recommend one media technician for each school up to 1,000 students.

Seven "basic" and one "advanced" item from the EMAC recommendations for local production equipment were compared with the findings of this study. Except for the spirit duplicator which was reported in 95.4 per cent of the schools, a small percentage of the schools had any of the other items.

Five non-print materials, filmstrips, slides, disc recordings, tape recordings, and 8 mm loops, were compared. A considerable increase in the amount of each of these materials would be necessary in the schools surveyed in order to realize the EMAC standards.

A direct comparison of the amount of equipment in the schools surveyed with the EMAC Guidelines was not possible because of the flexibility and differences in the bases for calculations. The 16 mm and overhead projectors were the only types of equipment which were available in quantities close to the recommended EMAC standards.

CHAPTER VI

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The main purpose of this study was to establish the status of audio-visual programs in Saskatchewan high schools. In order to accomplish this purpose a survey instrument was developed.¹ Items were formulated to gather the following information about Saskatchewan high school audio-visual programs: organization, facilities for AV media use, budget, personnel, local production of materials, in-service training, materials, equipment, major barriers to an improved AV program, evaluation, and future plans. The questionnaires were mailed to the principals of all 339 Saskatchewan schools, public and private, which enrolled grades 10, 11 and 12. All data were requested on a basis of grades 10, 11 and 12 only. Three hundred six schools or 90.3 per cent of the schools returned the completed questionnaires.

Each school was assigned to one of four enrollment groups. Schools with an enrollment from 1 to 100 were placed in Group I. This included 181 or 59.2 per cent of the schools. Seventy or 22.9 per cent of the schools had an enrollment from 101 to 200 students and were placed in Group II. Thirty-six or 11.8 per cent of the schools had an enrollment from 201 to 500 and were placed in Group III. Nineteen or 6.2 per cent of the 306 schools had an enrollment over 500. They became Group IV. Data from the questionnaires were tabulated and calculated

¹See Appendix B.

by computer for sums and percentages of responses. Selected data were classified according to enrollment groups, organizational patterns of available audio-visual services, and the position of the person completing the questionnaire. From the data collected a comparison among the enrollment groups was reported for each item of the questionnaire. Comparisons of data among four organizational patterns of available audio-visual service were made and reported where meaningful. The comparison of data according to the position of the person completing the questionnaire was not reported.

Quantitative responses were reported for eighty-five selected² schools which enrolled only grades 9 to 12 and 10 to 12.

A second purpose of the study involved a comparison, wherever possible, of the findings of the study with the EMAC Guidelines.

This chapter includes a summary of the findings, a summary of the comparison with the EMAC Guidelines, conclusion and recommendations based upon an analysis of the findings and a review of the literature, and some suggestions for further study.

I. SUMMARY OF THE FINDINGS

Organization

Only twenty-three or 7.5 per cent of the schools reported being served by a district IMC with an AV media specialist. Twenty-seven or 8.8 per cent of the schools were served by a district IMC without an

²See page 44.

AV media specialist. Another forty-six or 15.1 per cent of the schools had a building IMC only, while a large majority of the schools, 206 or 68.6 per cent, had neither district nor building IMC.

Group I and II schools tended to coordinate their AV program through the principal's office, while Group III and IV schools more often used AV coordinators for this purpose. Audio-visual committees were reported in only forty or 13.1 per cent of the schools.

Audio-visual materials were located in a wide variety of places in the schools. The library housed AV materials in 117 or 38.6 per cent of the schools. Many schools used staff rooms or had AV materials housed in several locales. AV materials were not catalogued in 159 or 52.3 per cent of the schools. Student access to AV materials appeared to be limited, with 143 or 47.2 per cent of the schools reporting little or no student access to AV materials.

Facilities

A higher percentage of Group IV schools had facilities for the use of media than schools in other groups. Of all the schools surveyed, few had the facilities listed. Space designated as a library was reported by 269 or 88.2 per cent of the schools. One hundred seventy-six or 63.3 per cent of the schools had less than one-quarter of their classrooms equipped with adequate light control for 16 mm projection; 206 or 77.4 per cent of the schools had less than one-quarter of their classrooms equipped with 60" x 60" or larger screens.

Budget

AV budgets were reported by 149 or 49.7 per cent of the schools. No one type of budget was predominant. In Group I schools, the individual most often responsible for preparing and expending the AV budget was the principal. In Group IV schools, it was the AV coordinator who most often had these responsibilities.

The 1968 instructional media expenditures were reported for eighty-five high schools. Expenditures for AV equipment in forty-nine of the eighty-five schools ranged from \$1.42 per pupil in Group II to \$3.05 per pupil in Group III. AV materials expenditures for fifty of the eighty-five schools varied from \$0.81 per pupil in Group I to \$2.76 per pupil in Group IV. AV expendable supplies expenditures for forty-eight of the schools ranged from \$0.35 per pupil in Group I to \$1.25 per pupil in Group IV. Library book expenditures for seventy-one of the eighty-five schools were reported from \$6.07 per pupil in Group II to \$10.29 per pupil in Group IV.

Personnel

AV coordinators were reported in 169 or 57.7 per cent of the province's high schools. The percentage of schools with AV coordinators was greatest in Group IV schools and schools served by a district IMC with an AV media specialist. Only thirty-nine or 22.4 per cent of the 169 coordinators had taken from one to three university audio-visual courses. None had more than three university audio-visual courses. One hundred thirty-six or 78.2 per cent of the

coordinators spent from one to five hours per week at their AV duties, while only thirty-eight or 21.5 per cent had from one to five hours of released time for AV duties. AV coordinators had relatively extensive teaching experience with 68 per cent reporting more than five years. The largest single reason, 41 per cent, for choosing AV coordinators was their interest in AV. Their most commonly reported responsibilities were consulting in AV matters with teachers and consulting in AV matters with principals.

Student assistants were used in only seventy-three or 24.6 per cent of the schools. Proportionately more Group IV schools used student assistants. Fifty-six per cent of the schools used their students only in the classes where they were enrolled. The most common responsibility of the student assistants was operation of equipment.

Local Production of Materials

Apart from three office-type items, spirit duplicator, mimeograph and thermal process copier, quantities of equipment for local production were minimal. Group IV schools tended to own more production equipment and produce more items of AV materials per school. Overhead transparencies, audio tapes and photographic prints were produced in greater numbers by a greater percentage of schools than other materials. Control of production supplies tended to be on an informal basis.

In-Service AV Training

Training of staff members in the use of AV media was reported by

only 104 or 34.2 per cent of the schools. Salesmen, principals, and AV coordinators, in that order, most often presented AV demonstrations. Displays of AV equipment and materials at teachers' conventions within the past two years were reported by about half of the schools.

Materials

Library books were the most common instructional material found in the schools. Disc recordings, audio tape recordings, filmstrips and transparencies were the most commonly reported audio-visual materials in the schools, but each averaged less than 0.8 items per pupil. Video tape recordings, 8 mm reel films, and 8 mm loop films were almost non-existent.

Equipment

Sixteen millimeter projectors, overhead projectors and reel tape recorders were the types of equipment found in the largest numbers in the widest range of schools. Group IV schools had a greater variety of types of AV equipment than the schools in other groups.

Major Barriers to an Improved Audio-Visual Program

A lack of money was reported as a major barrier to an improved audio-visual program in 199 or 65.9 per cent of the high schools. A lack of time for teacher preparation of materials in 186 or 61.6 per cent of the schools and inadequate physical facilities in 171 or 56.6 per cent of the schools were reported as barriers. One hundred forty or 46.5 per cent of the schools reported a need for professional AV counsel for teachers.

Evaluation

Evaluation was reported generally as casual by 175 or 58.3 per cent of the schools and non-existent by 87 or 29.0 per cent of the schools. The EMAC Guidelines had not been studied by 211 or 72.0 per cent of the respondents; another 44 or 15.0 per cent had no opinion of them. The EMAC Guidelines were considered a reasonable goal by twenty-nine or 9.9 per cent of the respondents; nine or 3.1 per cent of the respondents rated them as unreasonable. A larger proportion of Group IV schools, than schools in other groups, felt that the EMAC Guidelines were a reasonable goal.

Future Plans

Plans for increased use of 16 mm films were indicated by 117 or 40.8 per cent of the schools. A majority of Group IV schools reported plans to use more 8 mm loops while 103 or 54.2 per cent of all schools reported no plans to try them. One hundred seventy-four or 63.0 per cent of the schools reported plans for increased use of the overhead projector and 148 or 51.7 per cent reported plans for increased use of the reel tape recorder. Group IV schools indicated plans for more use of cassette recorders and 2" x 2" slides. There was no indication of a trend toward the use of more television.

Only eight or 2.7 per cent of the schools reported plans to hire a media specialist while twelve or 4.1 per cent of the schools, planned to obtain a media technician within two years. Most schools without plans to hire media specialists or technicians gave lack of budget as a reason.

Organizational Classification

Most items classified according to organization of media services did not reveal definite trends or directions. However, there were several exceptions. A larger percentage of schools served by a district IMC with an AV media specialist had (1) AV coordinators, (2) AV coordinators who assumed a broader range of responsibilities, (3) AV budgets, (4) AV committees, and (5) AV student assistants, than schools without this type of service.

II. A SUMMARY OF THE COMPARISON OF THE FINDINGS WITH THE EMAC GUIDELINES

A comparison was made of the findings of this study with the EMAC Guidelines which were first published in 1968 as a set of audio-visual standards for Canadian schools. Because of difficulties in making the study parallel to the EMAC Guidelines, only a limited comparison was possible.

The facilities for media use reported by Saskatchewan high schools which were compared with the EMAC Guidelines included darkrooms, conduit for closed circuit television, light control in classrooms and screens in classrooms. The number of Saskatchewan schools reporting each of these facilities fell well below the EMAC standards. Of fifty high schools reporting expenditures for AV materials during 1968, twenty-five or 50.0 per cent of the schools spent less than \$1.00 per pupil. Only five or 10.0 per cent of the schools spent more than \$4.00 per pupil. The EMAC Guidelines recommend from \$5.00 to \$8.00 per pupil annually for AV materials. Qualifications and numbers of AV media personnel in

Saskatchewan were considerably below the EMAC standards. Only the spirit duplicator, of several selected items of local production equipment, was available in quantities close to the EMAC recommendations. Other items were well below these levels. Five non-print materials--filmstrips, slides, disc recording, audio tape recordings and 8 mm loops--were reported in Saskatchewan high schools in extremely small quantities when compared with the EMAC recommendations. A direct comparison of equipment standards was not possible because of a lack of specificity in the EMAC Guidelines and a difference of calculation basis in several instances.

III. CONCLUSIONS

The following conclusions were reached after a review of research and literature related to audio-visual programs in secondary schools, a comparison of the findings of this study with the EMAC Guidelines and an analysis of the findings from this study. It should be noted that these conclusions apply only to the Saskatchewan high schools, as defined in this study, which took part in the survey. It should be further noted that in arriving at these conclusions, the limitations of the questionnaire method of collecting data have been considered.

1. Most Saskatchewan high schools with an enrollment over 500 students provide a greater amount and variety of audio-visual services than schools with less than 500 students.

2. The organizational pattern for audio-visual media service to Saskatchewan high schools appears to be related to the development

of several aspects of their AV programs. More schools served by a district IMC with an AV media specialist have AV budgets, AV coordinators, AV committees and AV student assistants than schools without this type of organization.

3. The physical facilities for classroom use of AV media in many Saskatchewan high schools are inadequate according to the EMAC recommendations.

4. Few Saskatchewan high schools receive sufficient financial support to develop AV programs to the level recommended by the EMAC Guidelines.

5. Few Saskatchewan high schools have the professional and technical personnel which the EMAC Guidelines recommend in order to implement an effective audio-visual program. Most of the people presently acting as audio-visual coordinators in the high schools do not have the professional qualifications recommended by the EMAC Guidelines for a person in such a position. They do not receive adequate released time for their AV duties and they do not assume responsibilities in accordance with the EMAC recommendations.

6. Few Saskatchewan high schools have implemented programs for local production of AV materials. Most schools have few of the items of local production equipment recommended by the EMAC Guidelines. A very limited number of AV materials have been produced by Saskatchewan high schools.

7. Audio-visual in-service programs for teachers have not been developed in many Saskatchewan high schools. Most of the schools do not provide any AV media training for their teachers. One-half of the schools

surveyed reported a need for professional AV counsel for teachers.

8. Saskatchewan high schools as a group do not have an adequate supply of AV materials according to the EMAC standards. Nor do the annual expenditures for AV materials in many of the schools reach basic minimums specified by the EMAC Guidelines.

9. The data collected indicate that the quantity and variety of AV equipment in many Saskatchewan high schools are insufficient by the EMAC standards.

10. The three major barriers to an improved Audio-visual program most commonly cited by Saskatchewan high schools were a lack of financial support, the need for time for teachers to prepare materials and inadequate facilities for the use of AV media. This apparent lack of support in the areas of finance, personnel and facilities would seem to indicate that the development of adequate programs in audio-visual media does not have a high priority in Saskatchewan high schools.

11. Evaluation of their audio-visual programs is not carried on in many Saskatchewan high schools. The EMAC Guidelines have not been utilized in most of these schools as a basis for audio-visual program evaluation.

12. Future plans for AV media programs in Saskatchewan high schools seem to indicate that the use of 16 mm film, overhead transparencies and reel tape recordings will increase.

IV. RECOMMENDATIONS

One of the purposes of this study was to make recommendations based upon a review of pertinent research and literature, the findings

of this study, and a comparison of the findings with the EMAC Guidelines. From this basis, the following recommendations seem appropriate.

1. In order to reach the levels of development recommended by the EMAC Guidelines, audio-visual media programs in Saskatchewan high schools will require leadership. The schools need qualified audio-visual media specialists with sufficient time available to develop the programs. Because there are very few people in the province's high schools with these qualifications, it is recommended that bursaries be established to encourage interested teachers to pursue professional training in AV media. Administrators and school boards must be encouraged to provide the released time necessary for organizing and operating audio-visual programs.

2. If development of audio-visual programs in Saskatchewan high schools is to reach an acceptable level, the EMAC Guidelines should be utilized by all Saskatchewan high schools. An evaluation of each school's audio-visual program should be made in relation to the EMAC standards and a long range plan should be formulated for upgrading the existing situation, if the evaluation indicates a need.

3. In order to improve the physical facilities for the use of media in Saskatchewan high school classrooms, future school construction in the province should have the basic minimum facilities as recommended in the EMAC Guidelines as a requirement for provincial grants. The problem of inadequate physical facilities for the use of media in existing classrooms should be studied with a view to planning necessary alterations.

4. In an attempt to cope with the inequalities in media programs between the small and large enrollment high schools in the province there should be consideration given to establishing district IMC's. These IMC's could offer a range of media services, personnel, materials and equipment not now available to small schools.

V. SUGGESTIONS FOR FURTHER STUDY

The findings of this study and the survey of availability of Canadian research in this area indicate that there is a need for research in all aspects of audio-visual media. Several specific suggestions resulting from this study are the following:

1. Because of the importance of utilization practice relating to audio-visual media, research should be done to determine the extent and effectiveness of the use of audio-visual media in Saskatchewan classrooms.

2. The attitudes of the people involved in any program are vital to the program's success or failure. A study should be done to assess the attitudes of administrators, teachers, school boards and students of Saskatchewan high schools toward audio-visual media utilization and the effect of these attitudes upon the development of media programs.

3. Data from this study indicated that financing of audio-visual programs in Saskatchewan high schools is inadequate. It would seem that a study of the financing of media programs by the province and school districts with recommendations for improvement should be undertaken.

4. Judging by the large number of Saskatchewan high schools of low enrollment which have been unable to provide adequate AV media services, it would seem that combining services to several school districts may be desirable. Research should be done to explore the feasibility of establishing regional IMC's which would provide AV media personnel and services to a number of school systems.

5. There is a need to assess the present and future needs of the schools for qualified AV media specialists and technicians. At the same time the availability and appropriateness of professional training for such persons should be studied.

6. The findings of this study have indicated the existence of several centralized AV media services at the school district level in Saskatchewan. More information is needed about the types of services offered, the personnel employed, the present levels of development, future plans for development, and the attitudes of the schools toward the IMC's.

B I B L I O G R A P H Y

BIBLIOGRAPHY

A. BOOKS

- American Library Association and National Education Association. Standards For School Media Programs. Chicago: American Library Association, Washington: National Education Association, 1969.
- Brichell, Henry M. Organizing New York State for Educational Change. New York: The University of the State of New York, 1961.
- Brown, James W. and Kenneth Norberg. Administering Educational Media. New York: McGraw-Hill Book Company, 1965.
- Brown, James W., Richard B. Lewis, and Fred F. Harderodt, A-V Instruction: Materials and Methods. New York: McGraw-Hill Book Company, 1964.
- Dale, Edgar. Audio-Visual Materials in Teaching (Revised Edition). New York: Holt, Rinehart and Winston, 1962.
- de Kieffer, Robert E. Audiovisual Instruction. New York: The Center for Applied Research in Education, Inc., 1965.
- Erickson, Carlton W. H. Administering Instructional Media Programs. New York: The Macmillan Company, 1968.
- Godfrey, Eleanor P. The State of Audiovisual Technology: 1961-1966. Washington: Department of Audiovisual Instruction, National Education Association of the United States, 1967.
- Good, Carter V. Introduction to Educational Research. New York: Appleton-Century-Crofts, 1963.
- Green, Allan C. (ed.). Educational Facilities with New Media. Washington: Department of Audiovisual Instruction, National Education Association in Collaboration with The Center for Architectural Research, Rensselaer Polytechnic Institute, 1966.
- Hall, E. M. and L. A. Dennis. Living and Learning: the Report of the Provincial Committee on Aims and Objectives of Education in the Schools of Ontario. Toronto: Newton Publishing Co., 1968.
- Miller, J. D. (ed.). Media Canada: Guidelines for Education. Toronto: Pergamon of Canada Ltd., 1969.

Miller, Neal E. (ed.). Graphic Communication and the Crisis in Education. Washington: Department of Audiovisual Instruction, National Education Association, 1957.

Ontario Curriculum Institute Committee on Instructional Aids and Techniques. Technology in Learning. Ontario Curriculum Institute, 1965.

Travers, Robert M. W. An Introduction to Educational Research. Second edition. New York: The Macmillan Company, 1964.

Trow, William Clark. Teacher and Technology: New Designs for Learning. New York: Appleton-Century-Crofts, 1963.

Trump, J. Lloyd, and Dorsey Boynham. Guide to Better Schools. Chicago: Rand McNally and Company, 1961.

B. PERIODICALS

Bergeson, Clarence O. "Relationship of Library Science and Audiovisual Instruction," Audiovisual Instruction, Vol. 12, No. 2, February, 1967, pp. 101-103.

Brich, E. Michael. "Learning Center," Audiovisual Instruction, Vol. 12, No. 8, October, 1967, pp. 786-792.

Davis, O. L. Jr. "Understanding Technology and Media: a Curriculum Imperative," Educational Leadership, Vol. 26, No. 1, October, 1968, pp. 65-69.

Godfrey, Eleanor P. "The Role of the Building Coordinator - Fact and Potential," Audiovisual Instruction, Vol. 12, No. 2, February, 1967, pp. 104-106.

Goodlad, J. I. "The Future of Learning and Teaching," AV Communication Review, Vol. 16, No. 1, Spring, 1968, pp. 5-15.

Heinrich, Robert. "What is Instructional Technology?" Audiovisual Instruction, Vol. 13, No. 3, March, 1968, pp. 220-222.

Hyer, Anna L. "Setting Quantitative Standards," Audiovisual Instruction, Vol. 6, No. 10, December, 1961, p. 546.

Krohn, Mildred L. "Learning and the Learning Center," Educational Leadership, Vol. 21, No. 4, January, 1964, pp. 217-222.

- Meierhenry, W. C. "Media Competencies for Teachers," Audiovisual Instruction, Vol. 14, No. 1, January, 1969, pp. 45-46.
- Morris, Barry (ed.). "The Function of Media in the Public Schools," (A Task Force Position Paper), Audiovisual Instruction, Vol. 8, No. 1, January, 1963, pp. 9-14.
- Phillips, Murray G. "IMC--The Rationale," The Clearing House, Vol. 37, No. 6, February, 1963, pp. 381-383.
- Preston, Ellinor G. "The Librarian Sees His Role in the Materials Center," Educational Leadership, Vol. 21, No. 4, January, 1964, pp. 214-216.
- Shea, Elizabeth A. "The Graphic Art Center in a Public School System," Audiovisual Instruction, Vol. 13, No. 4, April, 1968, pp. 356-358.
- Streeter, C. Edward. "Teacher Competency and Classroom Use of Audiovisual Media," Audiovisual Instruction, Vol. 14, No. 1, January, 1969, pp. 60-62.
- The Canadian Audio Visual Review, Vol. 4, No. 1, January-February, 1968.
- _____. "The Cost of Audio-Visual Instruction, 1962-63/68-69," School Management, Vol. 12, No. 10, October, 1968, pp. 67-84.
- The Wisconsin Department of Audio-Visual Instruction. "The Role of School Librarians and Audiovisual Specialists," Audiovisual Instruction, Vol. 13, No. 4, April, 1968, pp. 378-379.
- Wilkinson, C. E. "Organizing an AV Program," School Progress, Vol. 37, No. 11, November, 1968, pp. 60-63.

C. UNPUBLISHED MATERIALS

- Dralle, Wayne Roger. "The Status of Senior High School Audio-Visual Programs in Indiana in 1963-64 with Recommendations for Improvement." Unpublished Doctoral Dissertation, Indiana University, Bloomington, 1964.
- Forbes, George W. "A Plan for the Establishment and Organization of an Audio-Visual Instructional Materials Center for the Secondary Schools of Farmingdale, New York." Unpublished Doctoral Disseration, School of Education of New York University, New York, 1965.

- Foster, John Edwin. "The Administrative Means of Extending the Use of Audio-Visual Materials in Saskatchewan." Unpublished Doctoral Dissertation, Indiana University, Bloomington, 1950.
- Quirk, Sister Mary Richardine. "An Analysis of the Use of Audio-Visual Materials in Catholic Elementary Schools." Unpublished Doctoral Dissertation, The Catholic University of America, Washington, D.C., 1965.
- Severns, Charles William. "The Audiovisual Education Program in Springfield, Illinois Public Schools." Unpublished Master's thesis, Illinois State University, Normal, 1966.
- Smith, Steve N. "A Study of the Organization, Administration and Utilization of Audiovisual Materials in the Junior High Schools of Salt Lake City School District." Unpublished Master's thesis, University of Utah, Salt Lake City, 1966.
- Streeter, Charles Edward. "A Study of Relationships Among Selected Factors Affecting Media Use by Classroom Teachers within Selected School Systems." Unpublished Doctoral Dissertation, Michigan State University, East Lansing, 1967.
- Taylor, Norma Lee. "Study to Determine Effective Methods of Organizing and Administering an Audio-Visual Program for the Kanawha County Elementary Schools." Unpublished Master's thesis, Marshall University, Huntington, 1966.
- Tisdale, Ray. "An Inquiry into the Effectiveness, Use, and Administration of Audio-Visual Materials in the Lake View Elementary Schools." Unpublished Master's thesis, Sull Ross State College, Alpine, 1962.

A P P E N D I C E S

A P P E N D I X A

THE EDUCATIONAL MEDIA ASSOCIATION OF CANADA GUIDELINES
AS FIRST PUBLISHED IN THE CANADIAN AUDIO VISUAL REVIEW
(JANUARY-FEBRUARY, 1968)

Guidelines

Classroom Equipment for Secondary Schools

TYPE OF EQUIPMENT	BASIC	ADVANCED
1. 16 mm Sound Projector and 42" mobile stand complete with extension cord	1 per 10 learning stations	1 per 5 learning stations
2. 8 mm Projector	1 per building	Number will necessarily have to be based on availability of film cartridges. There is a trend toward individual learning stations or independent study and additional equipment will be needed as programme develops.
Significant changes are occurring in the 8 mm medium which do not at present justify quantitative guidelines. Because of the important contribution of these films to individual and small group learning, however, conservative quantities have been suggested. As equipment and materials become more stabilized and as sources expand, schools should increase the quantities beyond the amounts suggested in these guidelines.		
3. 2 x 2 Slide Projector (Remote control, tray and stack loading)	1 per department where applicable	1 per learning station where applicable
4. Filmstrip or Combination Filmstrip-Slide Projector	1 per department where applicable	1 per learning station where applicable
5. Filmstrip Viewer with rear projection screen or small low-wattage projector	1 per learning station where applicable Also a quantity of individual viewers (1 per 30 students, maximum of 30 per school) should be available from a central source within the building for special project use or for individual study in school or at home.	
6. Overhead Projector and 16" or 26" mobile stand complete with extension cord	1 per 4 learning stations	1 per learning station
7. Opaque Projector and 34" or 42" mobile stand	1 per building	1 per building level having at least six learning stations
8. TV Receivers and stands, wall brackets or ceiling mounts	See separate section on ETV	
9. Micro-Projector	1 per school	1 per department where applicable

TYPE OF EQUIPMENT	BASIC	ADVANCED
10. Record Players	1 per learning station where applicable	
11. Tape Recorders	1 per learning station where applicable	
12. Projection Carts complete with extension cord	Additional carts and stands will be required for the support and movement of equipment. Sometimes the same cart may be used with several pieces of equipment. A folding stand with an adjustable, tilting top is recommended for filmstrip and slide projectors.	
13. Light Control	Every classroom should have adequate light control. Adequate implies the availability of facilities to control light to the extent that all types of projected media can be utilized effectively.	
14. Video-Tape Recorders	The state of this field is so dynamic that no specific recommendations can be made. See separate section on ETV.	
15. Closed-Circuit TV	All new construction should include provision for cable termination at each learning station, and older buildings should be wired for closed-circuit television as needs develop. All leads should terminate in one distribution room.	
16. Radio Receivers (AM-FM)	1 per learning station where applicable	Central distribution system (AM-FM)
17. Projection Screens	One permanently mounted screen per classroom. No smaller than 60" x 60" with provision for eliminating keystoneing. Large screen for auditorium and large group instructional area of satisfactory size.	Additional portable screens of suitable size for special purposes
18. Local Production	Dry mount press and tacking iron Paper cutter 30" x 30" Transparency Production Equipment: Diazo printer Wet copy machine Dry copy machine Mechanical lettering 8 mm camera Camera for enlarging and reducing overhead transparencies Equipped darkroom Spirit duplicator Large font typewriter 35 mm copy camera and stand Light box 35 mm still camera Film splicer (8 mm) Tape splicer Label printer	Add to basic list: Slide duplicator Electric stencil cutter

Guidelines

Classroom Equipment for Elementary Education

TYPE OF EQUIPMENT	BASIC	ADVANCED
1. 16 mm Sound Projector and 42" mobile stand complete with extension cord.	1 per 8 learning stations 1 per building level	1 per 4 learning stations
2. Filmstrip or Combination Filmstrip-Slide Projector	1 per 3 learning stations	1 per learning station
3. 2 x 2 Slide Projector (Remote control, tray and stack loading)	1 per school	1 per 5 learning stations
4. Filmstrip Viewer with rear projection screen <i>or</i> small low-wattage projector	1 per learning station Also a quantity of individual viewers (1 per 15 students, maximum of 30 per school) should be available from a central source within the building for special project use or for individual study in school or at home.	3 per learning station
5. Overhead Projector and 16" or 26" mobile stand complete with extension cord	1 per 4 learning stations	1 per learning station
6. Opaque Projector and 34" or 42" mobile stand complete with extension cord	1 per building	1 per building level having at least 6 learning stations
7. TV Receivers with stand, wall bracket or ceiling mount	1 per learning station if programmes are available locally	
8. Record Players	1 per learning station K to 3; 1 per grade level 4 to 6. 1 pair of earphones for each learning station. Where listening stations are utilized, 6 to 10 earphones and junction box are needed. Listening stations should be interchangeable with all audio equipment.	1 per learning station plus earphones for each. Where listening stations are utilized 6 to 10 earphones and junction box are needed.

TYPE OF EQUIPMENT	BASIC	ADVANCED
9. Tape Recorders	1 per 5 learning stations. 1 pair of earphones for each learning station. Where listening stations are utilized, 6 to 10 earphones and junction box are needed. Listening stations should be interchangeable with all audio equipment.	1 per learning station with earphones as needed. Where listening stations are utilized 6 to 10 earphones and junction box are needed.
10. Projection Carts complete with extension cord	Additional carts and stands will be required for the support and movement of equipment. Sometimes the same cart may be used with several pieces of equipment. A folding stand with an adjustable, tilting top is recommended for filmstrip and slide projectors.	
11. Light Control	Every classroom should have adequate light control. Adequate means the availability of facilities to control light to the extent that all types of projected media can be utilized effectively.	
12. Video-Tape Recorders	The state of this field is so dynamic that no specific recommendations can be made. See separate section on ETV.	
13. Closed-Circuit TV	All new construction should include provision for cable termination at each learning station, and older buildings should be wired for closed-circuit television as needs develop. All leads should terminate in one distribution room.	
14. Radio Receivers (AM-FM)	1 per learning station at the grade level having the greatest number of sections.	1 central distribution system (AM-FM).
15. Projection Screens	One permanently mounted screen per classroom, 60" x 60" or larger with provision for eliminating key-stoning. Large screen for auditorium and large group instructional area of satisfactory size.	Additional portable screens of suitable size for special purposes.
16. Local Production Equipment	<p>Dry mount press and tacking iron Paper cutter 30" x 30" Transparency Production Equipment: *Diazo printer Wet copy machine Dry copy machine Spirit duplicator Large font typewriter *Polaroid camera in special situations *35 mm camera and accessories as needed Tape splicer Stencil duplicator Mechanical lettering Label printer *Smaller schools should have access to this equipment</p>	<p>Access to the following equipment located centrally or in another school: 8 mm camera Copy camera and stand Electronic stencil cutter Camera for enlarging or reducing overhead transparencies Darkroom Slide duplicator Offset printing Microfilm reader/printer</p>

Guidelines

The School Resource Centre

Equipment and materials are integrated; one without the other is useless. The following suggest how much should be placed in the resource centre for maximum effectiveness.

THE following is basic equipment for individual and group use, located in the resource centre based on an enrolment of 600 pupils. School equipment may be used to augment the equipment in the resource centre and vice-versa. Where school enrolment exceeds 600 pupils, equipment for individual use will need to be increased accordingly.

NON-PRINT EQUIPMENT

One 16mm sound motion picture projector

One overhead projector

One screen, 60" x 60" or larger

One filmstrip projector

10 filmstrip viewers, for use in the library

20* individual filmstrip viewers

Five* tape recorders

Three* slide projectors

Five* record players with earphones and jack boxes

One portable listening station

Two television receivers (see separate section on ETV).

*Some equipment may be used by individuals for special projects in classrooms or for individual study in classrooms or homes.

NON-PRINT MATERIALS

A. Guidelines for Non-Print Materials in the Resource Centre.

1. Pictures—1,000 basic

2. Filmstrips — 500 basic or

three per student, whichever is greater

3. Slides—1,000 basic

4. Recordings — 200 basic or one per student, whichever is greater

5. Tapes—400 basic or two per student, whichever is greater

6. Single Concept Films — 200 basic

7. 16mm Motion Picture Films —These are obtained from a central collection in the district or area.

B. Guidelines for the Display Areas for Non-Print Materials in the Resource Centre.

1. Pictures — one large X-ray filing cabinet per 1,000 pictures

2. Filmstrips — two square feet of wall area per 100 filmstrips

3. Slides — four square feet of wall area per 1,000 slides, 20 slides per tray

4. Recordings—two square feet of floor space per 100 records

5. Tapes — four square feet of wall area per 100 tapes

6. Single Concept Films — five square feet of wall area per 100 films.

SCHOOL WORK AND STORAGE AREA

1. Media advisor's office, 120 sq. ft. minimum

2. Material Preparation Centre for use by teachers, 250 sq. ft. minimum. (This is in addition to the print preparation and maintenance room.)

3. Equipment storage for Resource Centre and home use, 300 sq. ft.

4. Equipment storage for classroom use, 150 sq. ft. per eight learning stations, at least one storage area per building level.

THE SCHOOL BUDGET NON-PRINT MATERIALS AND CONSUMABLES

A. Non-Print Materials for the Resource Centre.

1. Initial expenditure within three years of opening date: Fewer than 150 students, \$9,500 basic

Over 150 students, add \$30 per student to the basic \$9,500

2. Annual expenditure Five to eight dollars per student

B. Consumable materials for use by teachers in the Material Preparation Centre.

A minimum of three dollars per student for an initial programme. This amount does not include maintenance or replacement parts for equipment.

Guidelines

School Media Personnel

A developing media programme needs adequate staff to ensure efficacy and effectiveness of equipment and materials. On these pages, Guidelines takes a look at the role a media advisor and media technician plays in the media programme and when each is required.

THESE requirements are based on the assumption that the processing of non-print materials is handled commercially or by centralized services. Schools need additional assistance if processing is to be done in the school.

A. MEDIA ADVISOR

1. One media advisor half-time for schools under 300 students
2. One media advisor full-time for schools over 300 students

B. MEDIA TECHNICIAN

One technician for each school up to 1,000 students, excepting schools with video tape recorders. One additional technician for each additional 1,000 students or major fraction thereof.

C.

Additional clerks will be required to assist with the integrated programme in the resource centre.

The media advisor is a successful, certificated teacher, competent in educational media who:

1. Assists department heads, teachers and students with the utilization and integration of non-print materials in the instructional programme.
2. Evaluates and recommends non-print materials for use throughout the school, including the resource centre, in co-operation with the school staff and subject specialists.

3. Budgets for non-print materials and equipment for the school.
4. Supervises the requisitioning of non-print materials and equipment for the school.
5. Supervises the distribution and movement of non-print materials and equipment throughout the school.
6. Supervises the activities of the Audio-Visual Technician.
7. Acts as liaison between school personnel and the area or regional educational media centre.
8. Participates in the planning, development, and evaluation of all aspects of educational media services including loan services of non-print materials, educational television, local production, etc.
9. Participates in professional organizations and formal courses relating to both print and non-print materials.

The school media technician is a technically competent person working under the supervision of the school media advisor who:

1. Trains teachers and students to operate equipment and to prepare instructional materials.
2. Produces instructional materials
 - a. assists teachers to develop ideas into visual formats
 - b. prepares overhead transparencies

- c. produces 2" x 2" slides, both originals and duplicates
 - d. makes flannel board materials
 - e. dry mounts pictures
 - f. records and duplicates audio tapes
 - g. records and plays video tapes (where applicable)
 - h. operates the electronic stencil cutter
 - i. uses the facilities of the area or regional educational media centre to prepare instructional materials which cannot be produced in the local school.
3. Maintains media supplies and equipment
 - a. maintains supplies for the preparation of instructional materials
 - b. makes minor repairs to equipment and keeps a supply of spare parts such as projection bulbs, exciter lamps, belts
 - c. performs daily maintenance, including minor adjustments, of video tape recorders (where applicable)
 - d. carries out a program of preventive maintenance for all educational media equipment
 - e. schedules the requests for educational media equipment throughout the school
 4. Attends training sessions at the regional educational media centre. ✓

Guidelines

Educational Television

ETV successfully combines a philosophy of learning, computer systems, the video-tape recorder, screens and cables tucked into one big package. The following article explains the mechanical and aesthetic uses of Canadian ETV.

FIRST, television sets must be provided at a minimum of one 23-inch screen for every 15 pupils, and be so placed that every child can see and hear plainly. The picture must be of better resolution than a home set, because the student will be farther from the screen. The picture tube must be glare-free, and safe from implosion.

The circuit of the set must give a steady picture and, since the set may be moved or knocked frequently in school use, be sturdily built. It should also be capable of receiving U.H.F. signals and connectors to receive video-tape signals. In short, it must be of high quality and serviceability.

To provide the excellence of picture required in the classroom situation, the set requires a strong, steady signal. Since home antennas are designed to serve only one set, they are not effective in schools. In order to obtain the best signal, schools should have a mast with a separate head for each channel on which educational programmes are to be broadcast. Since these programmes may be used to serve more than one set, broad wave amplifiers should be included to strengthen the signal. Attenuators may be required to weaken the signal of close stations and amplifiers may be required for particular

channels to boost signal strength to distant sets.

The antenna leads should terminate in the same room as the school co-axial cable network terminates. In this room, there should also be a monitor and a meter to see and measure incoming signals, and a switching device, which will feed the desired signal to the proper room.

VIDEO-TAPE RECORDER

Programmes which are to be held for future use should be fed to a video-tape recorder. This is a machine capable of changing the signal to a magnetic pattern on an iron oxide coated tape, from 1/2 inch to 2 inches wide. This method is similar in manner to the method of storing radio broadcasts with an audio tape recorder using 1/4 inch tape. Video-tape recorders require the larger tapes to accommodate both picture and sound signals.

At present, video-tape recorders which can accept and play back recordings are relatively large, weighing 70 to 1,900 pounds. Prices range from approximately \$3,500 to \$50,000. All video-tape recorders require special care when in use, preferably by a technician. Few teachers would be capable of operating one. Tape for these machines costs about \$75 per hour, and is re-usable. One company is

producing a playback machine which will not record programmes, but will play back recorded tapes. The cost is approximately \$2,000. If recording is to be done centrally, then only a playback unit would be required in the schools. However, in the near future, schools may wish to produce and use their own programmes. In this event, a complete video-tape recorder and a television camera would be required.

At present, there is no rapid method available to educational systems for duplicating video-tapes. Hence the supply of tapes to a school will be very slow. If all television programmes during the school day are taped, the cost of tape would be approximately \$190 per day.

To get the signal from the antenna or video-tape to the classroom will require a co-axial cable line so that each teaching area will have one or more taps. The co-axial cable will carry many signals at once and will accommodate colour television signals as well as black and white.

There are some limitations in the use of co-axial cable. In the V.H.F. bands, only the channels not in use by neighbouring commercial stations may be used because of interference of signals in

Continued on page 34

Continued from page 30

the cable. In the U.H.F. band, there are similar limitations. Co-axial cable seems to be the most stable item of all television equipment. Its properties are well defined, and there is little chance of change.

Television signals may reach the school in four main ways:

OPEN CIRCUIT

1. By V.H.F. band channels, (used by home television sets in Canada). There are 12 channels and they are used exclusively by the CBC and commercial television stations.

2. By U.H.F. band, which has channels from 14 to 83 (not all usable). However, U.H.F. has seldom been used because of weak signal strength and because *most* commercial sets are not equipped to receive these channels.

3. The third method is open circuit over the 2,500 megahertz band. This is a generally weak signal, which requires line-of-sight transmission over specialized equipment. In other words, it works well over a small and relatively level area. It has been used in small areas of the United States. To use this system, a complete transmitting system is required as well as a special reception and converter system and the system, to say the least, is expensive and weak.

CLOSED CIRCUIT

The fourth method is distribution by closed circuit, or co-axial cable. This method is exactly similar to the co-axial cable circuits within the school, but it would link

all schools in a system to a central office. Co-axial cable circuits outside schools are available from community television antenna companies, or may become available through the Bell Telephone System.

PHILOSOPHY

Television by its information, drama, and sense of immediacy, has a place in the teaching-learning process. However, in its present form, it has inherent disabilities. First, because of insufficient television receivers, there has not been enough real opinion of the values and weaknesses of its programme. Second, because programmes have been provided at times that conflict with timetabling, and the development of the students, utilization has been a hit or miss effort, frequently wasting the time of the class.

Third, programmes have been prepared by people other than teachers, and as such have not been teaching tools. Fourth, the small screen and lack of colour have made it less effective than motion pictures. Fifth, its large cost as compared with other established methods, is a definite disadvantage.

However, all of the elements to make the television medium successful have now been added and refinements are projected.

Monochrome video tape recorders can be converted to colour. The change is expensive but possible, as costs of colour receivers decline and dependability increases. The small (maximum 23-inch) screens can be replaced by television sets

that will project pictures. This is already possible.

To really affect students, programmes must have the same professional polish as commercial programmes. Professional television personnel in achieving this polish often distort the content for teaching purposes. Therefore it will be necessary for some teachers to learn production skills; script writing, editing, directing, etc., so that educational programmes will be attractive to students.

The arbitrary timing of programmes can be overcome by video-taping devices, which although developed, are still difficult to operate, undependable, and bulky. Industry has not standardized its specifications so that any video-tape will play on any other video recorder or playback—sometimes even if the machines are of the same make. When video-tape recorders are successful, we will be able to hold programmes until the teacher wishes to use them. This is a must if television is to succeed.

THE FUTURE

Dial access is the wedding of television tapes to a computer system so that, by dialing a simple code number, television programmes or films will instantly appear for the viewer.

It may also be possible, in the future, to send all film, filmstrip or television programmes to the classroom from a central office. This will eliminate the need for teachers to use projectors or screens, room darkening devices or other costly, time-consuming classroom practices. ✓

A P P E N D I X B

QUESTIONNAIRE SENT TO ALL SASKATCHEWAN HIGH SCHOOLS

A STUDY OF AUDIO-VISUAL PROGRAMS IN SASKATCHEWAN HIGH SCHOOLS

Directions:

1. This report should be completed by the principal or person designated by him.
2. All questions should be answered on a basis of grades 10, 11 and 12 only (Division 4). Answers to quantitative questions should be prorated on this basis.
3. Boxes are provided for multiple choice answers. Indicate one choice by marking the appropriate box ☐.
4. Answers for statements with blanks will require either a number (87) or check (☒).
5. Answers should refer to present status unless the question specifically asks for figures for the year 1968.
6. If some of the data cannot be compiled without major effort, please make careful estimates.

Definition of Terms:

1. District Instructional Materials Center (IMC): a facility in a school district which collects, distributes and services print and audio-visual materials.
2. Building IMC: a facility operating within a single school which handles print and audio-visual materials.
3. AV Committee: 2 or more teachers delegated responsibilities related to a school's audio-visual program.
4. AV Coordinator: the person in a school who is responsible for the audio-visual program, even though this title may not be used.

General Information

- | | |
|---|--|
| <ol style="list-style-type: none">1. Name of School _____2. Town or City _____3. This form will be completed by
<input type="checkbox"/> Principal
<input type="checkbox"/> AV Coordinator
<input type="checkbox"/> Librarian
<input type="checkbox"/> Vice-principal
<input type="checkbox"/> Other (specify) _____4. Type of School
<input type="checkbox"/> Academic
<input type="checkbox"/> Vocational
<input type="checkbox"/> Composite5. Present high school (10,11,12) enrollment
_____6. Number of high school classes (home rooms)
_____7. Number of full-time equivalent high school teachers
_____ | <ol style="list-style-type: none">9. Your school's audio-visual program is coordinated through
<input type="checkbox"/> the principal's office
<input type="checkbox"/> the AV coordinator
<input type="checkbox"/> the library
<input type="checkbox"/> the subject areas
<input type="checkbox"/> not coordinated
<input type="checkbox"/> Other (specify) _____10. Does your school have an AV committee?
<input type="checkbox"/> Yes
<input type="checkbox"/> No11. School AV materials are located primarily
<input type="checkbox"/> in the library
<input type="checkbox"/> in the classrooms
<input type="checkbox"/> in an AV room
<input type="checkbox"/> in subject area offices
<input type="checkbox"/> Other (specify) _____12. Are AV materials in your school catalogued
<input type="checkbox"/> in the library
<input type="checkbox"/> in an AV room
<input type="checkbox"/> not catalogued
<input type="checkbox"/> Other (specify) _____13. Students in your school have
<input type="checkbox"/> access to AV Materials on same basis as books
<input type="checkbox"/> access to AV materials when supervised
<input type="checkbox"/> little or no access to AV materials |
|---|--|

Organization

8. Place your school in a category
☐ served by a district IMC with AV media specialist. (see definitions)
☐ served by a district IMC without an AV media specialist.
☐ served by a building IMC only
☐ served by neither building nor district IMC.

Facilities

Check each of the following facilities which your school has.

- 14. ☐ Building IMC (see definitions)
- 15. ☐ Library
- 16. ☐ AV Projection Room
- 17. ☐ AV office space
- 18. ☐ Darkroom
- 19. ☐ Conduit for present or future use of closed circuit TV
- 20. ☐ TV studio
- 21. ☐ Wired carrels
- 22. ☐ A central sound system (intercom) built to distribute recordings or radio broadcasts.

What percentage of your classrooms have

	1-25%	26-50	51-75	76-100	0%
23. Light control for 16mm					
24. 60"x60" or larger screens					
25. 3 or more electrical plugs					

Budget

- 26. Do you have an AV budget in your school?
 - ☐ Yes
 - ☐ No (if "no", disregard no. 27 to 32)
- 27. Your school's AV budget is
 - ☐ an independent budget
 - ☐ part of the library budget
 - ☐ part of the overall instructional budget
 - ☐ Other (specify) _____
- 28. Your AV budget is prepared by
 - ☐ Principal
 - ☐ AV coordinator
 - ☐ librarian
 - ☐ office of the superintendent
 - ☐ individual teachers
 - ☐ Other (specify) _____
- 29. Your AV budget is expended by
 - ☐ Principal
 - ☐ AV Coordinator
 - ☐ librarian
 - ☐ office of the superintendent
 - ☐ individual teachers
 - ☐ Other (specify) _____
- 30. What was your total budget for AV equipment during 1968?
\$ _____
- 31. What was your total budget for AV materials during 1968?
\$ _____

- 32. What was your budget for expendable AV supplies (film, transparencies, etc. for production) during 1968?
\$ _____
- 33. What was your total library book (not texts) budget in 1968?
\$ _____

Personnel

- 34. Does your school have an AV coordinator? (see definitions)
 - ☐ Yes
 - ☐ No (if "No", disregard no. 35 to 49)
- 35. His formal AV training is
 - ☐ 1 university AV class
 - ☐ 2 or 3 university AV classes
 - ☐ more than 3 university AV classes
 - ☐ Other (specify) _____
 - ☐ None
- 36. How many hours per week does he spend at his AV duties?
 - ☐ 1 to 5
 - ☐ 6 to 10
 - ☐ 11 to 15
 - ☐ More than 15
 - ☐ None
- 37. How many hours per week of released time does he have for AV duties?
 - ☐ 1 to 5
 - ☐ 6 to 10
 - ☐ 11 to 15
 - ☐ More than 15
 - ☐ None
- 38. How many years teaching experience does your AV coordinator have?
 - ☐ 1
 - ☐ 2 to 5
 - ☐ More than 5
 - ☐ 0
- 39. Your AV coordinator was chosen primarily because of
 - ☐ special training
 - ☐ his interest in AV
 - ☐ previous AV experience
 - ☐ he did not have a full teaching load
 - ☐ chance when assigning staff duties
 - ☐ Other (specify) _____

Check each of the following responsibilities handled by your AV coordinator.

- 40. ☐ Consults with teachers about AV matters

41. ☐ Conducts workshops and demonstrations
42. ☐ Consults with principal about AV matters
43. ☐ Trains and supervises student assistants
44. ☐ Helps teachers select materials
45. ☐ Helps teachers produce materials
46. ☐ Produces materials
47. ☐ Supervises distribution of equipment
48. ☐ Makes minor equipment repairs
49. ☐ Makes major equipment repairs

50. Does your school use AV student assistants?

- ☐ Yes
- ☐ No (if "No", disregard no. 51 to 59)

51. Your AV student assistants are used

- ☐ only during spare or study periods
- ☐ only in classes where they are enrolled
- ☐ excused from classes when needed
- ☐ Other (specify) _____

Check each of the following responsibilities handled by your AV student assistants.

52. ☐ Produce overhead transparencies
53. ☐ Operation of equipment for teachers
54. ☐ Distribution of equipment
55. ☐ Clerical work
56. ☐ Photography
57. ☐ Minor servicing of AV equipment
58. ☐ Assist with dubbing audio tapes
59. ☐ Other (specify) _____

Local Production of Materials

Check each of the following items which you have in your school.

60. ☐ Mechanical lettering equipment
61. ☐ Transfer lettering (pressure sensitive)
62. ☐ 35mm camera
63. ☐ 2 1/4 by 2 1/4 camera
64. ☐ 8mm movie camera
65. ☐ Copy stand
66. ☐ Television camera
67. ☐ Video tape recorder (TV)
68. ☐ Dry mount press and materials
69. ☐ Diazo printer and materials
70. ☐ Spirit duplicator (Ditto)
71. ☐ Mimeograph (Gestetner)
72. ☐ Off-set printing press
73. ☐ Electronic stencil cutter
74. ☐ Thermal Process Copier (Thermofax)

Approximately how many of each of the following materials were produced by your school last year. Mark 0 where appropriate.

75. ☐ Photographs (prints)
76. ☐ 2x2 slides
77. ☐ Mounted pictures
78. ☐ Filmstrips
79. ☐ 8mm motion pictures
80. ☐ TV video tapes
81. ☐ Audio tapes
82. ☐ Overhead transparencies

83. Supplies for local production are

- ☐ limited by subject area quota
- ☐ limited by a per teacher quota
- ☐ drawn from a central supply without formal regulation of amounts used
- ☐ not used in this school
- ☐ Other (specify) _____

In-Service AV Training

84. Are staff members in your school given training with respect to AV media?

- ☐ Yes
- ☐ No

85. Does your school provide AV demonstrations for teachers?

- ☐ Yes
- ☐ No (if "No", disregard no. 88 to 93)

Check each of the following who present in-service AV demonstrations in your school.

86. ☐ Classroom teachers
87. ☐ Principal
88. ☐ AV coordinator
89. ☐ Librarian
90. ☐ Salesmen
91. ☐ Department of Education Personnel
92. ☐ University personnel
93. ☐ Other (specify) _____

Indicate which of the following were part of your teachers' convention in the last 2 years.

94. ☐ Displays of AV equipment
95. ☐ Displays of AV materials (nonprint)
96. ☐ Demonstration lesson on the use of AV media
97. ☐ Guest speaker in the area of AV media
98. ☐ No sign or mention of media
99. ☐ Other (specify) _____

Materials and Equipment

For each of the following materials indicate the approximate number located in your school. Mark 0 where appropriate.

100. ☐ 16mm films (apart from practice film)
101. ☐ 8mm films (reel)
102. ☐ 8mm film loops
103. ☐ Filmstrips
104. ☐ Disc recordings
105. ☐ Audio tape recordings
106. ☐ Video tape recordings
107. ☐ 2 x 2 slides
108. ☐ Overhead Transparencies (teacher made)
109. ☐ Overhead Transparencies (commercial)
110. ☐ Library books (not texts)

For each of the following types of equipment, indicate the number in your school. Mark 0 where appropriate.

111. ☐ 16mm projectors
112. ☐ 8mm reel projectors
113. ☐ 8mm loop projectors
114. ☐ Language laboratories
115. ☐ Reel tape recorders

116. ☐ Cassette tape recorders
117. ☐ Combination slide-filmstrip projectors
118. ☐ Filmstrip projectors
119. ☐ Slide projectors
120. ☐ Viewers for slides or filmstrips
121. ☐ Opaque projectors
122. ☐ Micro projectors
123. ☐ Overhead projectors
124. ☐ Radios
125. ☐ Record players
126. ☐ Television Receivers
127. ☐ Portable screens
128. ☐ Mounted wall screens
129. ☐ Portable rear screens
130. ☐ Microfilm Reader

Barriers to an Improved AV Program

Check each of the following which you consider major barriers to effective use of media in your school.

131. ☐ Teacher indifference
132. ☐ Lack of time for teacher preparation of materials
133. ☐ Need for professional AV counsel for teachers
134. ☐ AV media too costly for results
135. ☐ Lack of money
136. ☐ Insufficient quantities of materials
137. ☐ Materials available don't fit the curriculum
138. ☐ Too difficult to schedule materials and equipment
139. ☐ School board not convinced about the value of media
140. ☐ Administrators not convinced about the value of media
141. ☐ Equipment too difficult to operate
142. ☐ Inadequate repair service available for AV equipment
143. ☐ Inadequate physical facilities in the school for the use of media

Evaluation

144. Evaluation of your AV program is
☐ planned and regular
☐ casual
☐ not being undertaken
145. How do you feel about the Educational Media Association of Canada Guidelines published in January-February, 1968 Canadian Audio-visual Review?
☐ a reasonable goal for your school
☐ an unreasonable goal for your school
☐ no opinion
☐ have not studied them

Future Plans for AV Media and Personnel

How would you rate your plans with respect to each of the following media? Check one.

	Continue present use	More use	Less use	Plan to try	No plan to try
146. 16 mm films					
147. 8 mm loops					
148. Overhead					
149. Tape Recorder (Reel)					
150. Tape Recorder (Cassette)					
151. 2 x 2 slides					
152. TV (broadcast)					
153. TV (video tape)					

154. Does your school plan to hire a person with professional training in AV communication?

- ☐ We have one now
☐ within 2 years
☐ within 5 years
☐ no; because of lack of budget
☐ no, no need for this type of person

155. Does your school plan to hire a non-teacher for AV production or maintenance?

- ☐ We have one now
☐ within 2 years
☐ within 5 years
☐ no; because of lack of budget
☐ no, no need for this type of person

Thank you for your efforts. Please make any comments below.

A P P E N D I X C

FIRST COVER LETTER SENT WITH THE INITIAL MAILING
OF THE QUESTIONNAIRE

429 Michener Park
Edmonton, Alberta,
March 10, 1969.

Dear Principal:

A study of audio-visual media in Saskatchewan high schools is being undertaken as part of a Master of Education program at the University of Alberta. The Saskatchewan Department of Education and Saskatchewan Teachers' Federation have endorsed the study, believing that it will contribute to the instructional program of the province.

The enclosed survey instrument will be used to collect the data. A group of audio-visual coordinators, while assessing the questionnaire, required about thirty minutes to answer it. Will you please complete and mail your copy by March 20? All answers will be confidential with no school identified.

Your contribution to the study will be most valuable.
Thank you for your assistance.

Yours sincerely,

Fred J. Buglas

FJB:sm
Enclosure

A P P E N D I X D

SECOND COVER LETTER SENT WITH THE INITIAL MAILING OF THE
QUESTIONNAIRE

Department of Education,
Avord Tower,
Regina, Saskatchewan.
March 7, 1969.

SUPERINTENDENTS OF SCHOOLS AND HIGH SCHOOL PRINCIPALS involved in completing the questionnaire from Mr. Fred Buglas, "An Administrative Survey of the Audiovisual Program in Saskatchewan High Schools"

Mr. Fred Buglas is a Saskatchewan teacher at present undertaking this study for his Master's Degree Program in Audiovisual Education at the University of Alberta. On completion of his work he will return to Saskatchewan. The Department of Education is aware of the study and endorses it as very worthwhile research.

We know that you will realize that much of the success of the survey depends upon the amount of data supplied. May we therefore solicit your support in having the questionnaire completed and returned to Mr. Buglas.

C. D. Peters,
Chief Superintendent of Schools.

(Mrs.) A. D. Davidson,
Supervisor, Visual Education.

A P P E N D I X E

POSTCARD REMINDER TO ALL SASKATCHEWAN HIGH SCHOOLS

March 17, 1969

Dear Principal:

Recently you received a questionnaire requesting information about the AV program in your school. If it has not been completed and mailed, please do so at your earliest convenience.

In order to make this study meaningful to Saskatchewan educators, the highest possible number of returns is essential. Regardless of the status of your AV program, each return has significance.

Once again, thank you for your efforts.

Sincerely,

Fred J. Buglas
429 Michener Park
Edmonton, Alberta

FJB:sm

A P P E N D I X F

COVER LETTER SENT WITH A SECOND COPY OF THE QUESTIONNAIRE
TO THOSE HIGH SCHOOLS WHICH HAD NOT RESPONDED

429 Michener Park,
Edmonton, Alberta,
March 27, 1969.

Dear Principal:

Earlier this month you received a questionnaire used to collect data for a study of audio-visual programs in Saskatchewan high schools. Mrs. A. Davidson, supervisor of the Visual Education Branch and Mr. C. D. Peters, Chief Superintendent of Schools have been kind enough to endorse the study as a worthwhile endeavor. Because the questionnaire from your school has not yet been returned, I am sending a second copy considering the possibility that the original may have been mislaid.

The value of the study and consideration given to any of its recommendations will depend directly upon the percentage of returns. As of March 26, we have received 251 out of 350 possible returns or 72% of the questionnaires distributed. Regardless of the size of your high school or the quality of your audio-visual program, each reply is significant.

Please complete the enclosed form and mail it at your earliest convenience.

Thank you for your assistance.

Yours sincerely,

Fred J. Buglas

FJB:sm
Enclosure

A P P E N D I X G

FORBES' LIST OF TEN RECENT AUDIO-VISUAL TEXTBOOKS

- Brown, James W., Richard B. Lewis, and Fred F. Harclerod. A-V Instruction: Materials and Methods. New York: McGraw-Hill Book Company, Inc., 1959.
- Cross, A. J. Foy and Irene F. Cypher. Audio-Visual Education. New York: Thomas Y. Crowell Company, 1961.
- Dale, Edgar. Audio-Visual Methods in Teaching. Second edition. New York: Dryden Press, 1954.
- Erickson, Carlton W. H. Administering Audio-Visual Services. New York: Macmillan Company, 1959.
- Harclerod, Fred and William Allen (eds.). Audio-Visual Administration. Dubuque, Iowa: William C. Brown Company, 1951.
- Kinder, James S. Audio-Visual Materials and Techniques. Second edition. New York: American Book Company, 1958.
- Sands, Lester B. Audio-Visual Procedures in Teaching. New York: Ronald Press, 1956.
- Schuller, Charles F. (ed.). The School Administrator and His Audio-Visual Program. Washington, D. C.: Department of Audio-Visual Instruction, National Education Association, 1954.
- Thomas, R. Murray and Sherwin G. Swartout. Integrated Teaching Materials. New York: Longmans, Green and Company, 1960.
- Wittich, Walter and Charles Schuller. Audio-Visual Materials Their Nature and Use. Third edition. New York: Harper and Row, 1962.

For Reference

NOT TO BE TAKEN FROM THIS ROOM

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